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CROSS-CATEGORIAL CLASSIFICATION

NOUNS AND VERBS IN GÚJJOLAAY EEGIMAA

EMPIRICAL APPROACHES
TO LANGUAGE TYPOLOGY

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Preface

This book provides a description of a typologically unusual phenomenon of overt classification of both nouns and verbs using the same linguistic means. My goal in this research is to demonstrate that such a cross-categorial use of the same classificatory devices is not random. Rather, it reflects a semantic categorisation of entities and events/states that nouns and verbs denote, respectively. Many of the ideas presented here are either existing ideas that are debated in typological research on noun class/gender systems, or they are novel. For example, the best way to analyse African noun class systems in order to make them more comparable to typologically similar agreement-based systems of nominal classification is debated. This book addresses this issue by offering a new approach to analysing complex noun class and agreement systems like that of Eegimaa. It includes a detailed study of the complex interactions in gender and number feature values which appear in agreement mismatches triggered by lexical hybrids. The analysis is done from the perspective of canonical typology. Canonical typology is also used to analyse Eegimaa non-finite verbs and their classification into several overt verb classes. The role that semantic principles play in the grouping of nouns into classes is also highly controversial in Niger-Congo noun class systems. My investigation of the semantic properties of the Eegimaa overt nominal classification system shows that physical properties like shape and culture-specific factors are fundamental principles underlying the semantic categorisation of entities denoted by nouns. I also show that the classification of verbs in their non-finite form has underlying semantic motivations. However, with verbs and the events/states they denote culture-specific factors are the dominant principles of categorisation.

The idea that the use of the same linguistic means to classify nouns and verbs in their non-finite forms reflects a semantic categorisation of events and states is a novel idea I developed following a discussion of Eegimaa non-finite verbs with Eva Schultze-Berndt in 2004. My subsequent research on this topic revealed that the classification of verbs is also intimately linked to that of nouns and relates to other aspects of Eegimaa grammar, such as complementation, non-finiteness, transitivity hierarchy distinctions, pluractionality and event individuation. It also reveals the existence of parallels between the nominal and verbal domains based on features such as boundedness.

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Abbreviations

ABSTR	Abstract
PASS	Passive
ANTIC	Anticipative
ASSOC	Associative
ATR	Advanced tongue root
AUX	Auxiliary
C	Consonant
CAUS	Causative
CL	Nominal class marker
COP	Copula
CPL	Completive
CTP	Complement taking predicate
DEF	Definite
DEM	Demonstrative
DIR	Directional
DIST	Distal
EXCL	Exclusive
FIN	Finite
FR	French
FUT	Future
G	Gender
HAB	Habitual
IMM	Immediate
INACT	Inactualis
INCL	Inclusive
INSTR	Instrumental
MED	Medial
NCM	Noun class marker
NCP	Noun class prefix
NEG	Negation
OBJ	Object
OVC	Overt verb classification
PERF	Perfect
PERM	Permissive
PL	Plural
POSS	Possessive
PREP	Preposition
PRO	Pronoun
PROD	Product
PROH	Prohibitive
QUANT	Quantifier
REAL	Realis
RECIP	Reciprocal
REDUP	Reduplication
REFL	Reflexive
REFL	Reflexive
REL	Relative
REP	Repetitive
SG	Singular
SUBJ	Subject
SUBORD	Subordination
TAM	Tense Aspect and Mood
V	Vowel
VBLZ	Verbaliser
VEN	Venitive
WL	Wolof

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1 Overt verb classification in spoken language: An introduction and a typology

1.1 The phenomenon

Languages in which nouns and verbs are overtly classified using the same markers and thereby categorising entities and events are rare.

This book investigates such a typologically and conceptually unusual phenomenon of cross-categorial classification, by comparing the classification of verbs to that of nouns in an African noun class/gender system, Gújjolaay Eegimaa (Eegimaa henceforth). The verb classification phenomenon analysed in this book is examined within the broad context of cross-linguistic comparative research on overt verb classification systems (Schultze-Berndt 2000; McGregor 2002; Gerner 2007; 2009; Paris 2013; Janda & Dickey 2014; Bisang 2018), and within the context of Atlantic languages which exhibit this phenomenon (Kennedy 1964; Sapir 1965; Bassène 2007; Sagna 2008; Cobbinah 2013; Watson 2015).

Eegimaa and a number of other related Atlantic languages are characterised by their use of noun class prefixes to assign both nouns and verbs into morphological classes. The Eegimaa nominal classification system is an overt one, as is typical in Niger-Congo noun class systems. This is exemplified in (1) and (2), where the nouns for 'ball' and 'plank' are overtly marked for morphological class membership with the prefixes *fu-* and *ga-*. Their agreement class or gender memberships[1] are also overtly expressed by the agreement prefixes on the agreement targets, in this case the definite determiners and the verbs.

(1) fu-baloŋ fafu fi-llillim
CLfu-ball(IV.SG) IV.SG.DEF IV.SG-be.lost.REDUP
'The ball is lost.'(ss20120725_Yaag)'

1 *Gender* and *noun class* designate typologically similar systems of nominal classification which are based on agreement (Corbett 1991). In this book, I use the term 'gender' to refer to the grammatical feature of 'gender'. I use the expression 'sex-based gender system' to refer to languages which make biological gender distinctions such as masculine vs. feminine. 'Gender' is also used to refer to an 'agreement class' as define in Corbett (1991). The term 'nominal class'/'M-class' is used here to refer to morphological classes (inflectional classes), while 'noun class system' is the term I use, following the tradition in Africanist literature, to refer to the kinds of gender systems found in Niger-Congo languages. In glosses, the morphological class of nouns is conventionally indicated using the phonological form of the noun class prefix, and the gender is indicated with Roman numerals. A more detailed justification for these choices is provided in Chapter III.

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(2) ga-babar gagu gu-llillim
CLga-plank(V.SG) V.SG.DEF V.SG-be.lost.REDUP
'The plank is lost.' (ss20120725_Yaag)

In addition to combining with nouns, noun class prefixes are also used to form non-finite verbs which have both nominal and verbal properties (see Chapter IV). Like nouns, non-finite verbs are also assigned to different morphological classes. The verbs for 'sell' and 'sew' in examples (3) and (4) illustrate instances where the prefixes *fu-* and *ga-*, which are used in the nominal domain (see (1) and (2)), are also found in the verbal domain with non-finite verbs, which in this instance take objects just like finite verbs.

(3) Fuppu n-a-hal-e fu-nnomen e-llu
Fuppu(I.SG) REAL-I.3SG-stop-CPL CLfu-sell CLe-meat(II.SG)
'Fuppu has stopped selling meat.'

(4) Fuppu n-a-hal-e ga-hikk su-ŋoç
Fuppu(I.SG) REAL-I.3SG-stop-CPL CLga-sew CLsu-hat(II.PL)
'Fuppu has stopped sewing hats.'

Given the use of the same overt markers to classify nouns morphologically and also verbs in their non-finite forms, I analysed this phenomenon as a manifestation of an overt verb classification system. Up to 15 noun class prefixes used as nominal class markers are also used to classify verbs in their non-finite forms. A key argument proposed in this book is that the overt classification of nouns reflects a categorisation of entities they denote. Likewise, the overt classification of verbs, using the same linguistic material, is also a manifestation of a categorisation of actions, events and states which the verbs describe.

I argue that parallels can be drawn between the categorisation apparent in the nominal and verbal domains, and that the use of the same markers often indicates the use of similar principles of categorisation. Overt verb classification (OVC) has been reported in languages of different families and from different parts of the world, notably in Australian languages (e.g. Schultze-Berndt 2000; McGregor 2002), South-American languages (e.g. Dickinson 2002; Sakel 2007), East and Southeast Asian languages (e.g. Gerner 2009; Paris 2013), and also in Slavic languages (e.g. Janda et al. 2013; Dickey & Janda 2015). But none of those languages has a nominal classification system of the Niger-Congo type. So, how is OVC defined, and what criteria can be used to ascertain its existence in a language, especially considering its various formal manifestations?

1.2 Definitions and criteria for overt verb classification

Two definitions are used here to characterise what is referred to as overt verb classification. Overt verb classification (sometimes abbreviated as OVC in this book[2]) may be defined following McGregor (2002: 1–2), as a phenomenon whereby "verbs and/or the events they refer to are overtly categorised into types by grammatical means". This definition is related to a second one according to which overt verb classification refers to "the existence in a language of a system of overt classificatory words or morphemes which divide the domain associated with verbs, or elements with verb-like semantics, into a limited number of categories" (Schultze-Berndt & Sagna 2010). These two definitions are related in that they point to a formal classification of verbal elements as a reflection of a semantic categorisation of the events and states they denote. There are cross-linguistic variations in the kinds of elements used as linguistic means in various systems of verb classification, as will be shown below. In Eegimaa, as pointed out above, the linguistic means used as classificatory elements are noun class prefixes. This book proposes to uncover the principles that govern the classification of verbal elements and how they are related to the categorisation of nouns and entities they denote.

The following four criteria, taken from Schultze-Berndt & Sagna's (2010) adaptation of McGregor's (2002: 18–22) defining criteria for classification in general, are used in this book to delimit the range of phenomena which can be subsumed under overt verb classification. According to these criteria, a language has a classification system when:

i. Classificatory elements from a small set of linguistic items (greater than one) collocate with members of an open class of lexical items.
ii. The use of the classificatory elements is obligatory in certain constructions – e.g. quantification for numeral (nominal) classifiers.
iii. The classificatory elements may or may not be dedicated classifiers. In other words, they can have other functions outside grammatical constructions in which they function as classifiers.
iv. The classificatory elements must show differences in patterns of collocation with the lexical elements. In other words, there are selectional restrictions on the combinations between elements from the closed class and those of the open class.

2 In some cases, I use the term "verb classification", which must not be confused with the common use of verb classification to refer to lexical aspect or aktionsart classification.

Though systems of overt verb classification have been reported in languages from different geographical areas of the world and from several language families, there are very few typological surveys or classifications of the different morphosyntactic characteristics and semantic properties of these systems. Some of these few works include McGregor (2002), which is mainly focused on Australian languages, Bisang (2018), which focuses on verb classification systems in the context of complex verb constructions, and Schultze-Berndt & Sagna (2010), which investigates overt verb classification in spoken, written and sign language.

In the next section I provide a survey of the morphosyntactic and semantic properties of the different types of verb classification that have been reported in the spoken languages of the world, based on an examination of the growing literature on this topic, and using the criteria presented in i to iv above. The verb classification systems are divided into types based on their morphosyntactic and semantic characteristics. A question that may arise from the discussion below, and which I will try to address, is to what extent can overt verb classification be treated as a unitary phenomenon.

1.3 Overt verb classification from a cross-linguistic perspective

Systems of nominal classification like noun class or gender systems, in which all nouns are assigned to a finite number of agreement-based categories, have a long tradition of research in linguistics. There are numerous examples of general references on this topic, including research in both morphosyntactic and semantic properties of these systems (see e.g. Dixon 1982; 1986; Craig 1986a; Corbett 1991; Aikhenvald 2000; Senft 2000). By contrast, systems of verb classification in which verbs are overtly classified using either the same markers as nouns or other dedicated elements are typologically unusual. As McGregor (2002: 1) points out, "there is nothing special about nouns that makes them the only parts-of-speech that can be classified grammatically". Languages with overt verb classification systems also exist, and the different types of overt verb classification systems found in the world's language exhibit different morphosyntactic and semantic characteristics. The different languages whose overt verb classification systems have been established using McGregor's criteria are presented in this section.

1.3.1 The Australian and South American type of overt verb classification

The Australian and South American type of OVC is found in Compound Verb Constructions (abbreviated as CVC in McGregor (2002)). This type of verb classifica-

tion is found in Northern Australian languages as in the non-Pama-Nyungan languages Jaminjung (Schultze-Berndt 2000), Nyulnyul and Gooniyandi (McGregor 2002). In South American languages OVC has been reported for Tsafiki (Dickinson 2002), a Barbacoan language spoken in Ecuador, and in Mosetén, a Mosetenan language spoken in Bolivia (Sakel 2007).

In the verb classification systems of the CVC type, a closed class of generic or inflecting verbs function as classificatory items and co-occur with an open class of uninflecting verbs also known as coverbs (Schultze-Berndt 2000). Example (5) illustrates such combinations in Jaminjung with the inflecting verb *-wirri* 'bite' and the uninflecting verb *digirrij* 'die'.

(5) burru-wirri-ji tharrey wirib digirrij!
3PL-bite-REFL there dog die
'The dogs are biting each other to death over there!' (Schultze-Berndt 2000: 292)

Languages which have a verb classification of the CVC type differ in their degree of grammaticalisation. McGregor's (2002: 171–174) comparison between the OVC systems of Gooniyandi and Nyunyul illustrate such differences. He shows that depending on the language, inflecting verbs are, in some cases, grammaticised, dedicated classificatory elements as in Gooniyandi. In other case, these inflecting verbs are non-dedicated and less grammaticised elements as in Nyunyul and also Jaminjung (Schultze-Berndt 2000), where inflecting verbs function as classificatory elements only in complex verb constructions, but not in simple predicate constructions.

South American OVC systems, like the Australian ones, also occur in complex predicate constructions as pointed out earlier. In Mosetén for example, the equivalents of inflecting verbs are grammaticised items called verbness markers (Sakel 2007). These verbness markers belong to a small set of eight verbs, six of which can occur alone outside classification contexts. In Mosetén, complex predicates are composed of verbness markers such as *-ye-* and a non-finite element like *Wai'-* 'boil' as exemplified in (6). The role of the verbness markers is to "contribute to the classification of the overall actions/events" (Sakel 2007: 319).

(6) Yäe Wai'-ye-' öjñï
1SG[M] boil-DO/BE-[1M.SG]>3F[SG] water[F]
'I boil the water.' (Sakel 2007: 319)

McGregor (2002: 29–34) identifies three main recurrent semantic "macro-features" as the underlying parameters for the overt classification of verbs in Australian

languages. These are "vectorial configuration", "aktionsart" and "valency". Vectorial configuration is a parameter of event categorisation which he described as the analogue of shape in the semantic categorisation in nominal classification systems. It describes "an abstract representation of action configuration [like] crooked path motion" (McGregor 2002: 29–30). Another way of explaining vectorial configuration is to say, using Bisang's (2018) words, that it is a feature which categorises events based on direction of movement: horizontal , i.e. "towards vs. away from a centre of interest", vertical , i.e. "moving up or down"; or movement into or out of a centre.

Aktionsart as a feature of event categorisation plays a major role in event categorisation in Australian languages. The distinctions expressed by this feature include telic versus atelic events and also dynamic versus stative ones.

As for valency, it describes event categorisation based on semantic valency, distinguishing transitive versus intransitive properties of the verb or VP (not the clause) (McGregor 2002: 31). In Gooniyandi for example, categorisation based on valency configuration includes distinctions between monovalent, avalent and bivalent verbs.

In Mosetén, the actions and events described by the classified complex predicate are mostly semantically categorised based on valency and the control exercised by subject/actor , e.g. causation and volition (Sakel 2007: 319). This is exemplified in (7) and (8), where high control by the subject/actor is expressed with the verbness marker *-tye-* whereas the use of the marker *-ki-* indicates lower control.

(7) Mö' öjñï Wai'-tye-'.
3.SG[F] water[F] boil-put-[1M.SG]>3F[SG]
'I put the water to boil.'

(8) Mö' öjñï Wai'-ki-'.
3.SG[F] water[F] boil-be-[3]F[SG]
'The water boils.' (Sakel 2007: 319)

In summary, verb classification of the Australian and South-American type occurs in complex predicate constructions where a closed class of elements, which differ in their degree of grammaticalisation, collocates with an open class of words. Semantically, the features underlying such formal classification include vectorial configuration/direction of movement, aktionsart, valency and control by the subject/actor.

1.3.2 The East and Southeast Asian type of overt verb classification

Overt verb classification has also been reported in East and Southeast Asian languages such as Kam (Gerner 2007; 2009) and Chinese (Chao 1968; Paris 2013), where verb classifiers occur with numerals and also with quantifiers in some languages. Gerner's (2007) comparative study of verb classification in five East and Southeast Asian languages from five different families (Sinitic, Tibeto-Burman (Northern and Southern Loloish), Kadai/Kam-Tai and Miao-Yao) showed that there are two subtypes of verb classification which mirror the nominal classification system, namely, the sortal and mensural verb classification. Sortal verb classes "actualise the temporal or phasal boundaries, which are implicit in the verb concept, while mensural verb classes create temporal boundaries which are not inherent to the verb" (Gerner 2007: 6). The sortal subtype of verb classification is considered to be the verb classifiers proper, in that they do not occur as classifiers in the nominal domain.

A first illustration of verb classification of the East and Southeast Asian type comes from Kam (Dong), a Kam-Tai language spoken in Southwest China. In this language, both sortal and mensural numeral classifiers are used with verbs to categorise event phases and frequency expressions (Gerner 2007; 2009). Example (9) illustrates sortal verb classification in Kam with the classifier ***ɕui*** 'fist' which indicates the numbers of beating events with a fist.

(9) Mau^{33} keu^{35} jau^{11} ja^{11} ɕui^{11}
3SG beat 1SG num:2 VCL:fist
'He beat me twice with his fist.' Gerner (2009: 698)

In Kam, as in other East and Southeast Asian languages, the sortal classificatory elements are not dedicated classifiers in the sense that they are not used exclusively for classificatory purposes. For example, the 40–50 sortal classifiers are "derived from nouns that elsewhere, occupy the role of instrument of the verbs they also modify as classifier morpheme" (Gerner 2009: 698).

For mensural verbal classifiers, Gerner (2007: 7) distinguishes collective verb classifiers and measure verb classification, noting that they are not strictly speaking verb classifiers since they also function as noun classifiers in the nominal domain. Collective verb classifiers collocate with verbs to describe events composed of a grouping of phases, as exemplified in (10) with data from Kam (Dong). As for measure verb classifiers, they collocate with verbs to describe the duration of an event or state, as in example (11).

(10) Mau33 heu35 jau11 ja11 tau53
3SG beat 1SG num:2 VCL:time
'He beat me on two occasions.' (Gerner 2007: 7)

(11) sai^{35} mau^{33} wa^{33} i^{55} ha^{35}
let 3SG say num:1 VCL:instant
'Let him say something for an instant.' (Gerner 2007: 7)

The verbal classification system reported for Chinese occurs in a Verb + Quantifier + Verbal Classifier sequence. Classifiers for verbs are called Measure for Verbs of Action (Mv) by Chao (1968: 615), who argues that "a measure for verbs of action expresses the number of times an action takes place" and that "it may be a cognate object expressing the action of the verb (Mv 1–18) or part of the body which performs the action (Mv 19–25), or the instrument with which the action is performed (Mv 26–40)". Thus, Chao recognises three semantic categories of verb classes from his 40 measures for verbs of action.

Paris (2013: 266) proposes an alternative analysis to Chao's three semantic categories, recognising two main semantic classes of verbal classifiers in Chinese. The first class exemplified by the verb classifier *tang* in (12) indicates the frequency of occurrence of an event, comparable to the Kam mensural verb classifiers. The second type of verb classification is illustrated in (13) with *tiao* and "simply indicate[s] an occurrence of an event" (Paris 2013: 271).

(12) Ta qu-le ji tang
he go-SFX several clv
'He went several times.'

(13) Ta xia-le wo yi tiao
he frighten-SFX I one clv
'He frightened me.' (Paris 2013: 271)

In summary, the verb classification systems reported for East and Southeast Asian languages show parallels with the numeral classification systems in that they occur in the context of quantification with numerals and sometimes with quantifiers like 'many'. The semantic categories which have been reported in these languages include frequency of event expression and duration of event or state. It is important to note, as Gerner (2007; 2009) does, that in languages like Kam, sortal verb classifiers are only found in the verbal classification, while mensural verb classifiers are found in both nominal and verbal domains.

The East and South-East Asian type of overt verb classification system shows no formal or semantic similarity with the Australian and South American type discussed above. The former occurs in the context of numeral classification, which it mirrors, whereas the latter is found in the context of complex verb constructions and shows no link to nominal classification. Semantic properties such as event frequency and duration, which have been reported in the East and South-East Asian type of overt verb classification, have no obvious relation with such semantic features as vectorial configuration, valency and control by the subject/actor, which are found in the Australian and South American type. Overall, the reason for putting these different systems together is an abstract one, based on the use of a limited number of grammatical items (words/morphemes) to classify elements with verbal properties and verb-like semantics into a finite number of categories.

1.3.3 The Slavic type of overt verb classification

McGregor's criteria for verb classification have also been used to show that in Slavic languages verbs are classified in their perfective forms using different aspectual prefixes (see Janda et al. 2013; Janda & Dickey 2014; Dickey & Janda 2015 for more discussion). Janda (2013) and Dickey & Janda (2015) show that Slavic aspectual prefixes function as lexico-grammatical unitisers of events and as such, they show parallels with numeral classifiers whose function is to unitise entities in numeral classification systems. The parallels with numeral classification systems suggested here do not imply that the overt classification is parasitic on nominal classification, as Slavic languages do not have numeral classification systems. It is worth pointing out, however, that the expression of event delimitation with event frequency in East and Southeast Asian languages, event unitisation in Slavic language and event individuation in Eegimaa (see Chapter VII) are promising areas for future research that may reveal connections between different systems of event categorisation. At this point, the link is hard to ascertain.

Janda (2013) argues that Slavic "purely perfectivising" prefixes, which belong to a limited group, show collocational restrictions with verbs they combine with and have unique semantic profiles in languages like Russian. Examples of such prefixes whose semantic profiles are put in capital letters include *na-* [SURFACE-], *vy-* [OUT OF CONTAINER-],[3] *v-* [INTO-], *pod-* [APPLY TO BOTTOM-] and *raz-* [APART-] etc. (see Dickey & Janda 2015 for more details).

3 One reviewer casts doubt on the classificatory functions of aspectual prefixes like *vy-* in Russian. However, given that the criteria used by Janda and the other Slavic scholars cited here

As a general summary for this section, it can be pointed out that the most well-known types of verb classification systems reported in the burgeoning literature on this topic are mainly the Australian and South American type, found in complex predicate constructions, the East and Southeast Asian type, which occurs in the context of quantification in numeral classification systems, and finally, the Slavic type, which is found with aspectual prefixes. While it is difficult, given the formal and semantic differences between these systems, to assign them to one morphosyntactic type, the presence of an overt element, obligatory in certain constructions, is the defining feature of overt verb classification systems. This contrasts with verb classification by aktionsart, which is generally covert. The reported semantic classes of event categorisation differ considerably from one type of verb classification to another as shown in the discussion above. The CVC types of verb classification include event configuration, aktionsart and valency, whereas in the verb classification systems found in numeral classification systems, event frequency and event duration are among the key semantic features motivating verb classification. In the Slavic system purely perfectivising prefixes are said to function as "lexico-grammatical unitisers" for events expressing "trajectory-landmark" relations as with *vy-nesti* [OUT OF A CONTAINER].

I now turn to the classification of non-finite verbs in noun class systems of the Niger-Congo type. Since I propose a new argument according to which overt verb classification can be found in noun class systems, it is important to discuss the Eegimaa OVC, first from a broader typological perspective using the criteria presented in Section 1.2. Following that, the classification of Eegimaa non-finite verbs is related to Bantu languages and other Atlantic languages which exhibit the same morphosyntactic characteristics of non-finite verb formation.

1.3.4 Overt verb classification in noun class systems

In Niger-Congo noun class systems, noun class markers are generally (not always) used to form non-finite verbs such as infinitives.[4] There is variation in the number of noun class prefixes used to form non-finite verbs in languages where this phenomenon is attested. In this section, I give an overview of the strategies by which

match the definition of overt verb classification used in the literature, I include these examples in my typology.

4 Various terms are used to refer to non-finite verbs in Niger-Congo languages. These terms are "infinitives", "verbo-nominals" and "verbal nouns". In this chapter, I survey the strategies of non-finite verb formation using the terms used by different authors. I discuss the meanings and relevance of these terms to Eegimaa in Chapter IV.

non-finite verbs are formed in these noun class systems. The criteria for OVC presented in Section 1.2 are used to determine instances where OVC can be ascertained.

1.3.4.1 The Eegimaa overt verb classification

The use of several different noun class markers to overtly classify both nouns and verbs in their non-finite forms has been mentioned in Section 1.1. Further illustrations are given in this section. In example (14) the singular prefix *e-* is used with the non-finite verb 'smoke out' while the prefix *ba-*, which functions as a singular and also a diminutive collective marker, attaches to the noun 'midge'. In example (15), however, the prefix *ba-* is used with a non-finite verb ('sweep') while the prefix *e-* is used with the noun 'hall'. Because of the focus on the verbs only the prefixes on these non-finite verbs are put in boldface in the examples.

(14) Use of the prefix *e-* on a non-finite verb and the prefix ba- on a noun.

Appu	n-a-maŋ-e	**e-**kkott-en
Appu(I.SG)	REAL-I.3SG-want-CPL	**CLe**-smoke-CAUS(II.SG)
ba-hola	babu	
CLba-midge(III.SG)	III.SG.DEF	

'Appu wants to smoke out midges.'

(15) Use of the prefix *ba-* on a non-finite verb and the prefix e- and noun.

wóli	ji-maŋ-e	**ba-**vvu	e-ssal	yayu
we	1PL.EXCL-want-CPL	**CLba**-sweep(III.SG)	CLe-hall(II.SG)	II.SG.DEF

'We want to sweep the village hall.'

The examples above show that prefixes *e-* and *ba-* can occur with both nouns and non-finite verbs. When they attach to verbs, they compete for the same slot as subject prefixes. For example, the complement taking predicate *-maŋ* 'want' takes subject prefixes such as *na-* '3SG' as in (14) in its finite form. In its non-finite form it takes the prefix *e-* as in *e-maŋ* 'want/like'.

A similar situation to the one illustrated in examples (14) and (15) is shown in examples (16) and (17) with the plural noun class prefix *ma-* and the singular prefix *ga-*. In example (16), the prefix *ma-* is used with the non-finite verb 'drink' whereas in (17) it is used with the noun 'weed'. Similarly, the prefix *ga-*, is used with the noun 'mead' in (16) while in (17), it occurs with the non-finite verb 'rake up'.

(16) Use of the prefix *ma-* on a non-finite verb.

Nestor	n-a-maŋ-e	ma-rem	ga-jjo
Nestor(I.SG)	REAL-I.3SG-want-CPL	CLma-drink	CLga-mead(V.SG)

'Nestor wants/likes to drink mead'

(17) Use of the prefix *ga-* on a non-finite verb.

Nestor	n-a-maŋ-e	ga-rato	
Nestor(I.SG)	REAL-I.3SG-want-CPL	CLga-rake.up(V.SG)	
ma-fos		mamu	
CLma-grass(VI.PL)		VI.PL.DEF	

'Nestor wants to rake up the grass.'

Examples (14) to (17) illustrate two important facts which are examined in detail in this book. First, they show that noun class prefixes can be used with both nouns and verbs in their non-finite forms. Second, they also show that several different noun class prefixes are used in the formation of these non-finite verbs (see also examples (3) and (4)). In fact, up to fifteen morphologically distinct noun class prefixes,[5] both singular and plural, are used to form non-finite verbs in Eegimaa, which shows that these classificatory elements belong to a closed class (see Criterion i. in Section 1.2). Noun class prefixes must combine with stems to form non-finite verbs, so they are obligatory in this context (Criterion ii.). Noun class prefixes are not dedicated verbal classifiers since they occur on both nouns and verbs (Criterion iii). Finally, the combination between noun class prefixes and stems to form non-finite verbs is lexically determined. For example, the prefix *ma-* cannot alternate with *ga-* on the root *-rato* 'rake up' illustrated in (17), to yield **ma-rato* 'rake up'. Conversely, the prefix *ga-* cannot combine with the root *-rem* 'drink' to yield a non-finite verb which would be **ga-rem* 'drink/drinking'. So, there are selectional restrictions on the combinations of prefixes and stems (Criterion iv.).

The application of the criteria for overt verb classification shows that non-finite verb forms are morphologically classified. The nominal and verbal properties of these forms are investigated in chapter IV, while in the rest of the book, I will show that such morphological classification reflects a semantic categorisation of different types of events.

A further important observation for Eegimaa is that two or more noun class prefixes can alternate with the same stems in the formation of non-finite verbs, resulting in three main situations which are investigated in detail in this book. In the first instance, a noun and a verb have the same root but take different noun class pre-

5 In the traditional approach to noun classes, which I used in previous work (e.g. Sagna 2008), these prefixes belong to 10 noun classes.

fixes. In this case, the noun and verb distinction is morphologically marked as illustrated with the root *-ffoñ* 'sing/singing/song' in example (18). The examples show that this root can be used in verbal contexts, as with *e-ffoñ* 'sing/singing' and in nominal context, as with the noun *gá-ffoñ* 'song', which, as shown by the ungrammaticality of example (19), cannot exhibit verbal properties like taking an object.

(18) The root *-ffoñ* in verbal and nominal uses.
a-maŋ-ut é-ffoñ gá-ffoñ-ol
I.3SG-want-NEG CLe-sing(II.SG) CLga-song(V.SG)-3SG.POSS
'S/he does not want to sing his/her songs.' (ss20081227_Zig)

(19) The root *-ffoñ* in verbal and nominal uses.
*a-maŋ-ut gá-ffoñ é-ffoñ-ol
I.3SG-want-NEG CLga-song(V.SG) CLe-sing(II.SG)-3SG.POSS
'*S/he does not want to song his/her singing.'

Questions which lie at the heart of the examination of these issues, such as: whether roots like *-ffoñ* 'sing/singing/song' are flexible roots, or whether one of these lexemes is derived by derivational rule, and if so, what the direction of the derivation is, are examined in detail in Chapter II.

In the second situation, exemplified in (20) and (21), a noun and a verb have the same noun class prefix and the same stem. Here, a word can be flexibly used as verb or a noun, and there is an apparent flexibility both at the root level and at the word form level. Issues of typological interest raised by these data, which are investigated in this book, include word class flexibility in the noun and verb distinctions (see e.g. Hopper & Thompson 1985; Rijkhoff & van Lier 2013) and conversion as well as the direction of such derivation (see e.g. Bauer & Valera 2005).

(20) The word form *e-lob* in verbal use.
a-maŋ-ut e-lob ma-agen
I.3SG-want-NEG CLe-speak(II.SG) CLma-truth(VI.PL)
'S/he does not want to tell the truth.'

(21) The word form *e-lob* in nominal use
e-lob-olal e-ba-ut
CLe-speech(II.SG)-1PL.INCL II.SG-finish-NEG
'Our speech (interaction) is not over.' (ss20141020_AT)

The third situation is characterised by prefix alternations on the same non-finite verbs. Different noun class markers can alternate with the same stem, allowing

the creation of two or more different non-finite verbs. In many cases, as with *e-gub* 'turn over' and *ba-gub* 'turn soil upside down with a shovel', there is a clear case of derivation with the creation of different lexemes having clear semantic distinctions. However, in cases like those illustrated in (22) and (23), the variation in noun class prefix on the same root reflects strong tendencies of distinctions in individuation, telicity, definiteness, affectedness, etc., which correspond to Hopper and Thompson's (1980; see also Næss 2007) broad distinctions between 'high' transitivity (telic, specific, punctual, definite, individuation) and 'low' transitivity (atelic, unspecific, non-punctual, non-individuation).[6] The present monograph provides a characterisation of the specific features of transitivity which account for the variations in the Eegimaa overt verb classification system. For example, when there are alternations such as those presented in (22) and (23), the non-finite verb form which takes an individuated object will tend to combine with noun class prefix *e-*, whereas the one with a non-individuated object will tend to combine with the prefix *ba-* (see (23)). Note that in clauses with non-individuated objects, the non-finite verb can take any noun class prefix including *ga-*, *fu-* and *ma-*.

(22) Expression of individuation with the noun class prefix e-.
a-are-aw n-a-kkumasi-e é-fosul
CLa-woman-I.SG.DEF REAL-I.3SG-begin-CPL CLe-weed(II.SG)
ga-al gagu
CLga-furrow(V.SG) V.SG.DEF
'The woman has begun weeding the furrow.' (ss20130819_RB)

(23) Expression of non-individuation with the prefix ba-.
a-are-aw n-a-kkumasi-e bá-fosul
CLa-woman-I.SG.DEF REAL-I.3SG-begin-CPL CLba-weed(III.SG)
'The woman has begun weeding.' (ss20130819_RB)

Noun class prefix alternation on non-finite verbs is a pervasive phenomenon in the grammar of Eegimaa and in some geographically and genetically close languages (see 1.4.2 below) and is not restricted to prefixes like the Eegimaa noun class marker *ba-*. Examples (24) and (25) provide further illustrations of prefix alternations, expressing distinctions based on definiteness versus indefiniteness with the noun class prefixes *e-* and *ma-* respectively. Note that wherever there is

6 The terms High and Low transitivity are used in this chapter for presentation purposes. The book provides a detailed exploration of the specific role played by the different features which are included in these broad characterisations.

a prefix alternation on a non-finite verb, one of the prefixes must be the prefix *e-* which is the default class marker in the nominal domain.

(24) Expression of definiteness with the prefix *e-*.

Nestor	n-a-maŋ-e	e-rem	ga-jjo
Nestor(I.SG)	REAL-I.3SG-want-CPL	CLe-drink(II.SG)	CLga-mead(V.SG)
gagu			
V.PL.DEF			

'Nestor wants to drink the mead.' (ss20130819_RB)

(25) Expression of indefiniteness with the prefix *ma-*.

Nestor	n-a-maŋ-e	ma-rem	ga-jjo
Nestor(I.SG)	REAL-I.3SG-want-CPL	CLma-drink(VI.PL)	CLga-mead(V.SG)

'Nestor wants to drink mead.' (ss20130819_RB)

Based on an analysis of noun class prefix alternations, I argue that there are two main levels of classification in the Eegimaa overt verb classification system. The first level of categorisation is between Hopper and Thompson's (1980) broad categories of high and low transitivity domains. Here, the categorisation of events/states tends to manifest itself by the use of the prefix *e-* for high transitivity, and the other prefixes like *ba-*, *ga-* and *su-*, which are mostly used for the expression of low transitivity.

The second level of categorisation is within the low transitivity domain and does not involve the alternation with the prefix *e-*. This involves an analysis of the semantic distinctions which motivate the classification of non-finite verbs in different classes, for instance between class *ba-* and class *ja-*. I show that these prefixes are used to categorise non-finite verbs that refer to different kinds of events and states. For example, the prefix *ba-* is used with pluractional events characterised by multiplicity of actions and participants, whereas the prefix *ja-* is used to describe atelic events with verbs of hunting, fishing and sports which involve opposite sides like wrestling.

To summarise, the Eegimaa OVC system is characterised by the morphological classification of non-finite verbs, using the same markers as nouns. As briefly illustrated above, several different noun class markers are used as morphological class markers for non-finite verbs. Those prefixes include both singular and plural markers, which can also function as collective markers in the nominal domain. The use of the same linguistic means to overtly classify both nouns and non-finite verbs leads to the question of whether there are parallels in the semantic categorisation of entities denoted by nouns, and that of events and states denoted by verbs. I will argue that similar principles of semantic categorisation are sometimes

found in both the nominal and the verbal domains. For example, the prefix *ba-*, which is used mostly as a diminutive collective marker for nouns is used with verbs to describe events characterised by multiplicity of actions and participants, as pointed out earlier. These issues are discussed in detail in chapter VII.

A question which arises from the discussion of the Eegimaa classification is whether this language is unique for classifying non-finite verbs in this way, or whether this phenomenon is widespread among Niger-Congo noun class systems. I begin this discussion by examining the use of noun class prefixes with infinitives in Bantu languages.

1.4 Non-finite verbs in Niger-Congo noun class systems

1.4.1 Bantu infinitives

In Bantu languages noun class markers are used to form infinitives. Bantu infinitives are usually analysed as nouns because they exhibit nominal properties such as taking noun class morphology and occurring in argument positions just like nouns. The most common infinitive class in these languages is class 15 **ku-* which, as has been reconstructed for Proto-Bantu in works by Meinhof, Meeussen and Guthrie (Meinhof 1906; Meeussen 1954; 1967; Guthrie 1971; Hadermann 1999; Maho 1999). Class 15 is generally a dedicated infinitive class in Bantu languages, i.e. it tends not to include pure nouns. In Swahili for example, class 15 *ku-* functions as a dedicated infinitive class where nouns are not found (Contini-Morava 2007: 1151). However, as Maho (1999: 194) notes, there are "a number of languages that classify a handful of nouns in class 15."

Class 15 is not the only class used to form infinitives in Bantu noun class systems. Several authors have pointed out that in some Bantu languages noun class markers from other classes are also used as infinitive markers, in addition to class 15. Those infinitive classes include class 5 and also classes 9 and 14 (Forges 1983: 260–261; Hadermann 1999: 437–439; Maho 1999: 211–214; Schadeberg 2003: 80). In a few instances, as Maho (1999: 214) points out, "one and the same language can also use more than one infinitive class", and there are cases where classes 15 and 5 are used interchangeably as exemplified in (26) and (27), with data from Nilyamba as presented in Maho (Maho 1999: 214) and originally taken from Forges (1983: 260).

(26) i-khenga
CL5-supporter, subir (Fr.)
'To support, to undergo.'

(27) ku-khenga
CL15-supporter, subir (Fr.)
'To support, to undergo.'

According to Hadermann (1999: 437–439), classes 15 and 5 "coexist arbitrarily" in some languages as in Lifonga (C.30). The prefix variation is sometimes due to dialectal variation, as is the case for the Mongo language (C.61). In some other cases, however, the alternations between class 15 and 5 may not have been synonymous historically but reflect semantic distinctions which may be subtle. Hadermann (1999: 461) hypothesises that class 15 might have been preferred for accomplishment events with non-specified objects, whereas class 5 would have been preferred for completed events.

In the context of overt verb classification, the possible semantic difference reflected in the choice of different infinitive class prefixes hypothesised by Hadermann look interesting in that such distinctions are based on some features of semantic transitivity. However, there is no synchronic evidence that there are collocational restrictions in the combination of different noun class markers with verbal stems, or that historically the use of different class markers reflects a categorisation of events in Bantu languages. Thus, it cannot be argued that the use of several noun class prefixes as infinitive markers in some Bantu languages indicates instances of overt verb classification.

1.4.2 Non-finite verbs in Atlantic languages

Compared to Bantu languages, Atlantic languages show more variation in the way non-finite verbs are formed, sometimes even within the same language branch. This is shown in the next subsections. There is also a difference in the way noun class data is presented. Atlantic languages do not have an established convention for numbering noun classes, as is the case for Bantu languages. For example, class 15 in an Atlantic language like Eegimaa is generally unrelated to class 15 in a language like Fula.

1.4.2.1 The classification of non-finite verbs in BAK languages (see Appendix A)

1.4.2.1.1 Jóola languages

The claim that several different noun class prefixes function as "infinitive" markers in Jóola languages dates back to the earliest grammatical descriptions. To my knowledge, Weiss (1939: 430) was the first to report this phenomenon for Jóola Foñi. He observes that in Jóola Foñi, there are two regular infinitive markers,

namely noun class prefixes *e-* and *ka-*. The former, he argues, is generally found with monosyllabic roots whereas the latter is predominantly found in polysyllabic ones. Weiss also points out that in rare cases, other noun class markers can function as infinitive markers. The noun class prefixes he lists as irregular infinitive markers are *fu-* as in *fu-ri* 'to eat', *ba-* as in *ba-raan* 'drink' and *ji-* as in *ji-boom* 'to dance'.

Weiss's findings were corroborated by subsequent research, notably Kennedy (1964) and Sapir (1965). Based on a study of nine languages of the Jóola cluster (including Bayot), Kennedy (1964) argues that Jóola "dialects" use several infinitive markers but the most common ones in most varieties are the prefixes *e-* and *ka-* (*ga-* in Eegimaa). While Kennedy confirms Weiss's claims that the noun class prefixes *e-* and *ka-* are the most common in Jóola Foñi, and that their use is phonologically conditioned, he also argues that these forms are used in the Huluf dialect, but that there is a tendency for the *ka-* prefix to displace the other, even with monosyllabic roots. Kennedy also argues that in the Kwatay "dialect", there are several infinitive forms, the most common being with prefixes *ka-* and *bi-*, and that in this language, the suffix *-u* is usually added to monosyllabic roots in infinitives, as in *ka-tei-u* 'run'. Coly's (2012: 100–102) description confirms these findings, while indicating that some verbs from class *ka-* take the suffix *-i* instead of *u-*. He also shows that infinitives formed with class *bu-* take the suffix *-o*.

Sapir (1965: 77) provides a more detailed analysis of Jóola Foñi infinitives than previous authors. He makes the following four observations. First, like previous authors (Weiss 1939; Kennedy 1964), Sapir argues that the use of noun class prefixes *e-* and *ka-* as infinitive markers is usually phonologically predictable with the former occurring on monosyllabic roots like *e-ga* 'to throw', and the latter mostly occurring with polysyllabic roots such as *ka-jijiren* 'to cause disorder'. Second, he argues that in certain unpredictable instances class 7 [*ka-*] is prefixed to monosyllabic roots and may contrast with class 3 [*e-*] or occur in free variation with it. An example of contrast is with *ka-pos* 'wash laundry' which contrasts with *e-pos* 'wash something'. Third, Sapir shows that Jóola Foñi also has irregular infinitive markers using class prefixes such as those in example (28) (Sapir 1965: 77).

(28) Irregular infinitives in Foñi

fu-ri	'to eat'
bu-ŋito	'to have sexual intercourse (animal)'
ji-bom	'to dance/ a dance'
mu-sis	'to be salty/salt'
ba-sang	'to court/ courtship'
ka-wac	'to swim'

Finally, Sapir makes the important observation that alternations are possible between the prefix *e-* and the irregular infinitive markers exemplified in (28) above in monosyllabic roots. He argues that though these alternations are accepted in elicitation, they have not been observed in natural speech.

Segerer's (2015: 145) research on Jóola Keerak reports that infinitives are nominalised forms that also retain some verbal properties. He also points out that, while these forms take different noun class prefixes, the individual variation observed in his data makes it difficult to determine the patterns of use of prefixes in infinitive formation.

My research on the classification of Eegimaa non-finite verbs briefly introduced in Section 1.3.4.1, shows similar patterns of use of several different noun class markers and alternation on verbal stems. The innovative argument I have proposed in my work thus far is that the use of several different noun class markers to form non-finite verbs shows a morphological classification of those non-finite verbs which reflects a semantic categorisation of events and states which they describe (e.g. Sagna 2007; Schultze-Berndt & Sagna 2010). I also argue that there are parallels in the semantic categorisation between the nominal and verbal domains. Subsequent research in Kujireray (Watson 2015), a language related to Eegimaa, which is spoken in a village bordering the Eegimaa homeland (known as the kingdom of Mof-Ávvi), and also in Baïnounk Gubëeher (Cobbinah 2013), a neighbouring language, arrive at similar conclusions.[7] In fact, there are many similarities between the semantic categories I propose in my earlier work, and those described in these works. These similarities along with the differences between my analysis and the ones proposed by these authors are discussed in detail in Chapter IV.

Bayot (another Jóola language) has at least three infinitive markers: *ka-*, *o-* and *ba-* which combine with verbal roots or verbo-nominal roots (Diagne 2009: 172–173). The treatment of infinitives in this language is brief, but there are indications that non-finite verbs are formed in an irregular fashion using more than one noun class prefix as an infinitive marker. It is not clear from the available Bayot description whether the choice of different prefixes as infinitive markers reflects a classification of events. Further research is required to determine whether Bayot has an OVC system comparable to Eegimaa.

Let us now turn to other BAK languages for which information is available on the formation of non-finite verbs.

7 Eegimaa, Kujireray and Gubëeher are neighbouring languages in intense contact. In Kujireray, several noun class prefixes (10 out of 20) are used in the formation of verbal nouns (non-finite verbs) as described in Watson (2015). Baïnounk Gubëeher also presents similar patterns (see Section 1.4.2.2.1).

1.4.2.1.2 Other BAK languages: Manjaku and Mankanya

My survey of other BAK languages[8] (See Appendix A) is limited to Manjaku languages, and Balanta. The use of more than one noun class to form non-finite verbs has also been described in the Manjaku language cluster, but no argument for overt verb classification has ever been made. Manjaku languages (including Mankanya and Pepel) are spoken in Northwest Guinea Bissau, in parts of the Lower and Mid Casamance (Trifkovic 1969; Doneux 1975) and in the Gambia. In these languages infinitives are mainly formed using noun class 9 *pë-* exemplified in (29) with data from Manjaku, taken from Kihm (2005: 470).

(29) na-kiëj a ngal pë-fäm pë-lëman
1-thief PRO want 9-break 9-door
'The thief wants to break the door.'

There is, more than one marker of non-finiteness in Mankanya (Trifkovic 1969: 117–121; see also Kihm 2005: 471), where class prefixes used to form non-finite verbs include class 3 *u-* as in *u-pay* 'climbing', class 4 *ngë-* as in *ngë-tsiilën* 'lying', and class 7 *ka-* as in *ka-tiiban* 'clearing the ground'. Kihm (2005: 472) argues that the prefix *ka-* is used to form "action nouns" comparable to masdars in Arabic, and that the "semantic (and syntactic) differences from /*pë-*/ infinitive-like formations, although certainly real, is not easy to assess". In Gaved (2020), only the prefix *p-* is presented as an infinitive marker. The available descriptions of Manjaku languages, including Mankanya, report the use of a single infinitive marker. However, a detailed morphosyntactic and semantic description of the use of Masdar-like forms with different complement-taking predicates is necessary to determine whether the use of different noun class prefixes with these forms reflects an overt classification of verb-like forms and the events they denote.

As for Balanta, N'Diaye-Correard (1970: 41) argues that in this language there are no pure verbal roots, but verbo-nominal roots which can function as nouns or verbs. She argues that in their verbal use as non-finite/infinitive-like elements, most Balanta verbs take class 7 *k-* as a marker of non-finiteness as with *k-fít* 'attacking'. She also reports the existence of up to four other markers of non-finiteness: *p-* as in *p-tɛ́ŋ* 'having', *gə-* as in *gə-mfɛr* 'pealing', *v-* as in *v-dé* 'listening', and non-finite verbs with a zero prefix as *bēntɛ* 'coming'. It is not clear from N'Diaye-Correard's discussion what motivates the distribution of verbo-nominals

8 Because the treatments of non-finite verbs are generally brief, it is not clear whether alternations are common in all Atlantic languages where several noun class markers are used to form infinitives.

into different noun classes, since she argues that given a root, it is not possible to predict the class membership of its verbo-nominal form. Creissels and Biaye (2016: 85, see also 178–186) present a more recent analysis of Balanta Ganja and argue that this language has actions nouns with nominal properties only. No prefix-taking nonfinite verbs with both nominal and verbal properties are found. These authors also report the existence of exclusively verbal infinitives forms which take no noun class prefixes or other nominal properties. Some of these infinitives take suffixes *-á* and *ná-*, depending on the context. The available analyses of Balanta Ganja provide no evidence that this language has a system of overtly classifying verbs using noun class prefixes.

In summary, there are indications from the available descriptions that the use of different noun class prefixes to form non-finite verbs like infinitives is a common feature of BAK languages. However, most available analyses of non-finite verbs in these languages are very brief, and do not provide enough discussion on the matter. This would help to determine, whether the use of several markers of non-finiteness reflects a categorisation of events and states, which would lead to conclude that some of these languages have OVC systems.

1.4.2.2 The North Atlantic branch

The formation of infinitives in the northern branch of the Atlantic family is not uniform as can be seen with Wolof, Noon and Fula. Unlike most Atlantic noun class systems, Wolof infinitives are not formed using noun class markers. Wolof has lost most of its noun class marking on nouns except very rare cases of consonant mutation (see McLaughlin 1997 for a detailed discussion), which means that noun class affixes are not available for use as infinitive markers. Infinitival forms are morphologically bare stems in this language, as exemplified in (30) where the verb 'go home' occurs in its bare form.

(30) jigéen ji bëgg na ñibbi
woman DEF want FIN.3SG go.home
'The woman wants to go home.'

In Noon, a Cangin language, infinitives are formed using noun class prefix *ki-* (Soukka 1999). This is the only reported infinitive marker in this language, and it sets it apart from most other Atlantic languages, where several different noun class markers are used to form non-finite verbs.

In Fula (Fulfulde/Pulaar) Arnott (1970: 372–373) shows that the noun class suffix used as an infinitive marker changes depending on the dialect. Thus, in the Gombe dialect spoken in Northern Nigeria, noun class suffix *-ki* (class 19) is the

main infinitive marker for most verbs as with *hultor-ki* 'to take fright'. Arnott also points out that sometimes the class suffix *-go* which is the main infinitive marker in Adamawa (Cameroon) and Sokoto and some other parts of Nigeria is also used in Gombe Fula. The other class suffixes used as infinitive markers in Fula are *-de* (west of Nigeria) and *-ngol* which he locates in Upper Volta, Gambia and Guinea.

In summary, northern Atlantic languages form non-finite verbs using different strategies. While in Wolof morphologically bare nouns are used in the infinitive form of the nouns, Noon and Fula use noun class affixes from the nominal domain to form infinitives. These class markers may vary depending on the dialect as is the case for Fula. Crucially, for our discussion on verb classification, there is no report that infinitives are formed using several different noun class prefixes to reflect a categorisation of events.

1.4.2.2.1 Nyun languages: Baïnounk and Buy languages

Doneux's (1990) work on Buy/Kobiana discusses three prefixes as markers of infinitives. First, he shows that class 3 *bu-*, which also contains nouns, is used as the infinitive marker for simple verbs like *bù-faat* 'fact of coming'. He also shows that class 13 *be-*, which includes underived nouns, is also used as an infinitive marker for derived verbs like *bèfídìh* 'open'. Finally, Doneux argues that class 25 *bá-* only contains verbs in the infinitive marker for simple verbs. There is no indication that the use of these different prefixes reflects the existence of different morphological classes of infinitives and a categorisation of events and states. Thus, it cannot be argued using the criteria for OVC that Buy/Kobiana has a verb classification system.

In Gubëeher, a Baïnounk language which is in contact with Eegimaa and Kujireray, infinitives/verbal nouns are formed using more than half of the nearly 30 different noun class prefixes as shown in Cobbinah (2013: 406). Noun class prefixes do not combine with stems in a random fashion. In many cases the combination of prefix and stem reflect semantic categorisation of kinds of events and states. For example *ja-* infinitives like *ja-naaf* 'to cultivate' are related to an agricultural domain (Cobbinah 2013: 407), whereas *ta-* infinitives like *ta-yah* 'to fish with arrow' relate to the domain of 'fishing' (Cobbinah 2013: 414). Alternations between infinitival prefixes are also attested in Gubëeher where the default prefix *bu-* expresses general meaning as in *bu-yah* 'to hit', whereas other prefix like *ta-* express idiosyncratic meaning as in *ta-yah* 'to fish with arrow'. Baïnounk Gubëeher infinitive/verbal noun formation exhibits properties of overt verb classification following the criteria presented in Section 1.2. Several prefixes are used as infinitive markers. The prefixes belong to a closed class. They combine with an open class of stems. Just like Eegimaa, the combinations between prefix and stems reflect a classification of event types.

Quint (Forthcoming) reports the use of several noun class prefixes to form infinitives (he also refers to them as deverbal nouns) in Gufangor, the Baïnounk language spoken in the village of Djifanghor. The majority of these infinitives, he argues, take prefixes *bu-* and *gu-*. Quint also argues that there are semantic motivations underlying the use of some noun class prefixes. For example, the prefix *si(n)-* is used with verbs to express reciprocity-interaction, as in *sinfégahi* 'meet each other'. Finally, Quint also reports instances of alternation of prefix alternation of the same verb stem. The analysis of Gufangor infinitives and their semantic motivations is preliminary. However, the available data seem to point towards the existence of an overt classification of verbs using noun class prefixes.

1.4.3 Sapir's 1971 "Southern Atlantic" languages

The available work from Sapir's 1971 Southern Atlantic languages shows that there are no unique infinitive markers and that non-finite verbs are formed using noun class affixes. This is true for Kisi (Childs 1995) where the default "singular" noun class suffix is used in most cases. Childs argues that other noun class markers are also used as infinitive markers in this language but there is no suggestion that this phenomenon is widespread enough to argue for a morphological classification of infinitives and a semantic categorisation of event and states. In Mani (Childs 2011), another Southern Atlantic language, non-finite verbs are generally formed using the prefix *ù-* from the default class *wo,* as exemplified in (31), and also with other prefixes like *ǹ-* illustrated in (32). Once again, there is no indication that more infinitive classes exist in this language.

(31) yá kìr ù-bàl
1SG.HAB tired NCM-write
'I am tired of writing.' (Childs 2011: 184)

(32) `m-pò
NCM-stand
'Standing/to stand.' (Childs 2011: 45)

There are not much data on the formation of non-finite verbs in Sapir's Southern Atlantic languages. However, the available descriptions show no evidence that non-finite verbs are assigned to different classes as is the case for languages of the Casamance discussed above. Thus, we cannot argue based on what is currently known on the formation of non-finite verbs in Atlantic languages that there is a classification of verbs in Southern Atlantic languages.

1.5 General summary of the typology of overt verb classification

In this chapter, I outlined the phenomenon discussed in the rest of the book. I used criteria originally proposed in McGregor (2002) to argue that Eegimaa has an overt verb classification system where the morphological classification of non-finite verbs (in their verbal use) reflects a semantic categorisation of events and states. I argued that the alternations of different prefixes on the same stems in Eegimaa are motivated by semantic transitivity. These arguments are developed further in the rest of the book. The Eegimaa overt classification was presented within the larger context of verb classification which has been reported in the languages of the world. These include OVC systems of CVC types found in Australian and South American languages and those found in the context of numeral classification as in East and Southeast Asian languages. OVC has also been reported in Slavic languages in the context of purely perfectivising prefixes.

The review presented here shows that the different kinds of overt verb classification systems have different formal properties. The semantic features found in these systems are not uniform either. Considering the variation in kinds of nominal classification systems found in the languages of the world, there is no reason to expect them to constitute a unitary phenomenon. Nominal classification systems include, for example, agreement-based systems such as noun class/gender, numeral classification systems and verbal classifiers. All of these are systems for classifying nouns and categorising the entities they denote. With verbs, the review presented in this chapter, summarised in Table 1, also shows that the formal manifestations of the overt grammatical classification and semantic categorisation vary considerably. However, it can be argued, following

Table 1: Formal and key semantic properties of overt verb classification systems in spoken languages.

Type	Markers	Semantic properties	Extension of nominal classification
Australian & South American	Inflecting verbs	Vectorial configuration, aktionsart, valency	No
East & Southeast Asian	Mensural & sortal classifiers	Event frequency & duration	Yes
Slavic	Aspectual prefixes	Event unitisers	No
African (Niger-Congo)	Noun class prefixes	Pluractionality, euphemism, durativity, social organisation, etc.	Yes

Schultze-Berndt and Sagna (2010), that systems of overt verb classification are comparable to nouns in that both of them provide a window onto human categorisation of both entities and events.

In this chapter, I surveyed the use of noun class markers to form non-finite verbs in Bantu and Atlantic languages and argued that while it is possible to argue for the existence of a system of overt verb classification in Eegimaa and some related or geographically close languages, the same cannot be said for Bantu languages, Southern Atlantic languages and many languages of the Atlantic Family, especially those of the Northern branch. In the rest of the book, I explore the phenomenon of verb classification in Eegimaa by establishing the class memberships for non-finite verbs and examining their nominal and verbal properties, before investigating the different semantic categories to which they belong. The structure of this book is presented in Section 1.6.

1.6 Outline of the book

After introducing the phenomenon of overt verb classification in this chapter, Chapter II provides a detailed discussion of the noun and verb distinctions in Eegimaa. The chapter sets the scene for the detailed discussion of the classification of nouns and verbs investigated in the rest of the book. I argue that Eegimaa has a monocategorial class of nouns which cannot function as verbs. Their roots are therefore incompatible with typical verbal inflections such as tense-aspect-mood marking and cannot occur in word forms taking objects. However, many lexical items which function as typical verbs also exhibit morphosyntactic properties of nouns in their non-finite forms, like occurring in subject position and triggering agreement on verbs. In places where there appears to be flexibility between nouns and verbs, the level at which such flexibility occurs is identified on the basis of cross-linguistic criteria (see e.g. Evans & Osada 2005; Rijkhoff & van Lier 2013) and language-specific criteria. In this chapter, I show that in Eegimaa, flexibility in the noun and verb parts-of-speech distinction can be recognised at the root level and word form levels.

In Chapter III, a novel way of analysing complex Niger-Congo noun class systems like Eegimaa is proposed based on the notion of agreement class/gender (Corbett 1991). A clear distinction is made in the analysis between nominal morphological classes and agreement classes or genders. The Eegimaa nominal classification system is discussed in the context of the typology of gender systems (sex-based and non-sex-based systems). The traditional approach used in research on Niger-Congo noun class systems is re-evaluated and compared to the approach I propose here. A study of the Eegimaa agreement system including semantic

agreement mismatches triggered by lexical hybrids is provided. I argue that Eegimaa has ten main genders, which I discuss in relation to the fifteen noun classes previously discovered for this language using the traditional approach for analysing Niger-Congo noun class systems (Sagna 2008; Sagna 2010). This chapter is an opportunity to re-examine my previous analysis of the morphosyntactic properties of the Eegimaa noun class system.

Chapter IV investigates the nature of non-finite verbs, starting from typological distinctions between finiteness and non-finiteness (Nikolaeva 2013; Bisang 2007; Cristofaro 2007; Koptjevskaja-Tamm 1993). It is followed by an analysis of the morphosyntactic properties of non-finite verbs in which I show that Eegimaa non-finite verbs are mixed categories in that they have both nominal and verbal properties. I compare these non-finite verbs to different kinds of nominalisations and discuss their classification between inflection and derivation. I also show that Eegimaa non-finite verbs exhibit characteristics of infinitives, verbal nouns and converbs, which makes it difficult to use either of these terms as a cover term. The term "non-finite verb" is preferred as a result, because it is the most inclusive of all these terms. I show that non-finite verbs generally occur following different kinds of complement taking predicates, some of which are control verbs (Givón 1980; Noonan 2007), and are assigned to different morphological classes as indicated by the prefixes they take. An investigation of the overt classes of verbs is carried out based on an examination of Eegimaa non-derived verbs, verbs derived through valency operations, and loanwords from contact languages, especially French and Wolof. The different overt classes of verbs found in Eegimaa are then presented.

In Chapter V, I present an analysis of the semantic principles underlying the classification of nouns in Eegimaa. Given that verbs are classified using noun class prefixes just like nouns, it is important to provide an account of the semantic properties underlying the grammatical classification of nouns where relevant. This provides a platform for an investigation of the semantic bases of the verb classification, and an uncovering of the parallels between semantic categorisation in the nominal and verbal domains. The integration of loanwords into the Eegimaa noun class system is examined and frequencies of the distribution into classes, as well as the semantic principles underlying such classifications, are provided in this chapter.

The question of why some non-finite verbs are assigned to one morphological class rather than another is investigated in Chapter VI. I provide an examination of within-class and between-class principles which lie behind the semantic categorisation of non-finite verbs. This means that the semantic motivations for grouping sets of non-finite verbs in one and the same class are studied for each class. I answer the following two questions: 1) What do verbs/events or states that

are grouped in the same class have in common? 2) What differentiates non-finite verb classes from each other? In this chapter, I show that the grouping of non-finite verbs into different overt classes is not random. On the one hand, situation types described by non-finite verbs in one class show common characteristics which motivate their grouping, but on the other hand, those characteristics also allow them to be distinguished from situations described in other verbal classes. In this chapter, I also show that the use of different noun class prefixes to classify both nouns and verbs shows parallels with the semantic categorisation of some entities denoted by nouns and actions and event denoted by verbs. An example of such parallels is the use of the prefix *ba-* as a diminutive collective marker for nouns, and for the expression of multiplicity of action with verbs.

The main focus of Chapter VII is to investigate the underlying motivations behind the alternations of different noun class prefixes on the same verbal stem. Here, I argue that such morphological alternations indicate strong tendencies of event delimitation. For example, the prefix *e-* is preferred on non-finite verbs occurring in clauses having high transitivity features, e.g. individuated objects and telic situations, whereas with low transitivity features, e.g. objectless clauses describing atelic situations, prefixes such as *ba-* and *ga-* are preferred to *e-*.

Chapter VIII concludes the book by summarising the main findings of the research presented here, and by showing their relevance to the overall picture of overt verb classification systems. I summarise the principles underlying the categorisation of verb/events and states in Eegimaa and I discuss the contribution of my findings to current knowledge on nominal and verbal classification and to the theories of conceptual categorisation of entities and events. Additionally, scope for future research is given within Atlantic and in the broader typological context.

2 Nouns, verbs and polycategorial stems in Eegimaa

2.1 Introduction

One of the central claims of this book is that Eegimaa categorises entities denoted by nouns and events denoted by verbs in their non-finite forms using the same linguistic means, i.e. noun class prefixes. Given the claim that the grammatical classification of nouns and verbs reflects a semantic categorisation of entities and events, respectively, it is important to show how nouns and verbs can be distinguished in this language.

The question as to whether all languages distinguish nouns and verbs is a controversial one as evidenced by the debate in the typological literature (Croft 2003, Evans & Osada 2005, Bisang 2011, van Lier & Rijkhoff 2013). In this chapter, I argue that Eegimaa has a class of nominal stems that are strictly monocategorial and meet the definition of noun. The nouns formed with these stems can only take nominal morphology and can only be found in argument functions. However, stems found in words that function as predicates are of two types. First, there are monocategorial verbs, which have very restricted nominal properties and cannot function as arguments without further modification. Second, Eegimaa has flexible stems and word forms that are compatible with both nominal and verbal affixes and can function as both nouns and verbs, denoting both objects and events, respectively, with the ability to function as arguments and predicates. These are polycategorial stems and word forms, which will be labeled verbo-nominals. The term verbo-nominal originates from the debate on the noun-verb distinctions in Mande languages following Houis's claim (1981 and Creissels 2017 for a critical discussion) that, in these languages, only the categories of nouns and verbo-nominals should be recognised. This analysis has also been applied to Joola Foñi (Hopkins L. 1995), a language related to Eegimaa, where only nouns and verbo-nominals are recognised as the main word classes.

My discussion of the noun-verb distinction in Eegimaa will build on the typological literature on the noun-verb distinction. The central claim of this chapter is that Eegimaa has a *noun/verb/flexible* type of word class system when viewed from Luuk's (2010) classification. This type of word class system is not typologically unusual as it is found in languages like English.

This chapter begins with a description of the class of monocategorial nouns and their morphology in Section 2.2. It is followed by an analysis of monocategorial verbs, and verbal morphology in Section 2.3, and then by an examination of flexible words in Section 2.4, where their possible analysis as instances of conversion/zero-

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derivation is explored. Note that the main focus of this chapter is to provide a morphological analysis of nouns and verbs. The morphosyntactic properties of non-finite verbs is investigated in Chapter IV. Section 2.5 provides a summary of this chapter.

2.2 A class of monocategorial nouns

2.2.1 Nominal morphology

2.2.1.1 The basic structure of the noun

The typical morphological structure of the noun in Eegimaa can be represented as in (1) and exemplified with the noun *ga-**ñen**-om* 'my hand'. A noun is generally composed of a root/stem (in boldface), to which a prefix, traditionally referred to as a noun class marker, is attached. The stem may or may not be followed by a suffix.

(1) Noun class marker-stem-(suffix)

Eegimaa has a class of monocategorial nouns. These are entity-denoting lexemes, which are formed with monocategorial stems and can be found in nominal function only. A subset of these is listed in Table 2 where the nouns appear with different prefixes in their singular and plural forms.

Table 2: Monocategorial stems and nominal lexemes shown in singular and plural forms.

Root	gloss	Singular	Plural
-how	'head'	fu-how	gu-how
-ñen	'hand'	ga-ñen	gu-ñen
-joba	'dog'	e-joba	su-joba
-jjamen	'goat'	e-jjamen	si-jjamen
-mangu	'mango'	fu-mangu	gu-mangu
-lellenja	'orange'	fi-lellenja	gu-lellenja

2.2.1.2 Noun class prefixes

Nouns in Eegimaa must take noun class prefixes (NCPs) also known as noun class markers.[9] Taking an NCP is therefore a morphological property of nominals in

9 Eegimaa NCPs have the following forms: *c–*, *ca–*, *bug–*, and *cu–/ci–*, where the *c* stands for the initial consonant of the noun class prefix. NCPs having the form *cu–/ci–* are phonological

Eegimaa. These NCPs have inflectional functions. For example, number values are marked on nouns by alternating singular NCPs and their plural counterparts in the same slot (see Table 2). As will be shown in Chapter IV (see also (Sagna 2008; 2011a), collective and distributive meanings are also expressed by NCP alternation. There is, however, a small set of nouns exemplified in Table 3, including loanwords, which do not take NCPs, but they trigger agreement on their agreement targets. Note, however, that such nouns (if count nouns) are only prefixless in the singular, but not in the plural as shown in the table.

Table 3: Prefixless nouns in the singular.

Root	gloss	Singular	Plural
-púddum	'viper'	púddum	sú-puddum
-lekkol	'school'	lekkol	si-lekkol
-lopitan	'hospital'	lopitan	si-lopitan
-jangu	'church'	jangu	si-jangu

Noun class prefixes also have derivational functions as they are used to form new lexemes. This is illustrated in example (2) where the same stems are used to form nouns denoting trees with NCP *bu-* and their fruits with NCP *fu-* without further suffixation.

(2)

bu-mangu	'mango tree'	fu-mangu	'mango'
bu-bah	'baobab tree'	fu-bah	'baobab fruit'
bu-nnana	'banana tree'	fu-nnana	'banana fruit'

2.2.1.3 Evaluative morphology

Prefix alternation is also the strategy used in evaluative morphology to form diminutive and augmentative expressions (see Table 4, and also Chapter V for the semantic analysis of evaluative morphology). Diminutive and augmentative markers are NCPs whose primary functions are singular and plural marking. As with collectives and distributives, there are no dedicated NCPs whose primary function is to express diminutive and augmentative meaning. Diminutive markers are primarily prefixes that combine with nouns denoting small entities,

allomorphs. The allomorphy is based on backness harmony (See Chapter 3 and Appendix B). All NCP vowels can take [+ATR] or [-ATR] forms. These allomorphs are based on Advanced Tongue Root vowel harmony. But they do not indicate a change in morphological class.

but which can also be used to describe entities as small by the alternation with NCPs that normally attach to the nouns denoting those entities. In the context of the noun-verb distinction, the use of NCPs to form diminutives and augmentatives is a characteristic of nouns but not verbs.

Table 4: Diminutive and augmentative with nouns.

Root	gloss	Standard form	Diminutive	Augmentative
-how	'head'	fu-how	ju-how	ga-how
-ñen	'hand'	ga-ñen	ji-ñen	fi-ñen
-joba	'dog'	e-joba	ju-joba	ga-joba

This short discussion shows that nominal prefixes classify nouns into morphological classes. In most cases the prefix on the noun is indicative of the agreement class (gender) of the noun. But this is not always the case. Issues regarding the morphological classification of nouns and their relationships with agreement are investigated in detail in Chapter IV. The important point to bear in mind here is, as pointed out earlier, that taking noun class prefixes is a property of nouns in Eegimaa.

2.2.1.4 Nominal inflectional suffixation

2.2.1.4.1 Possessive suffixes

Other morphological properties of Eegimaa nouns, which distinguish them from verbs, include their ability to take possessive suffixes as illustrated in Table 5. Possessive suffixes attach to the possessum when the possessor is human. Eegimaa distinguishes inclusive and exclusive first-person plural.

Table 5: Monocategorial nominal stem taking possessive suffixes.

Singular	gloss
yaŋ-om	'my house'
yaŋ-i	'your house'
yaŋ-ol	'his house'
yaŋ-olal	'our house (INCL)'
yáŋ-oli	'our house (EXCL)'
yaŋ-ul	'your house'
yaŋ-il	'their house'

With non-human possessors, the possessive pronoun *CL-O*, which shows agreement in gender and number with the antecedent noun, is used as a possessive marker. Example (3) shows a full NP in boldface, which is replaced by a pronoun in example (4).

(3) bu-roŋ **sí-be** **sasu**
CLbu-life(III.SG) **CLsu-cow(II.PL)** **II.PL**.DEF
'The life of the cows.'

(4) bu-roŋ **s-o**
CLbu-life(III.SG) **II.PL-PRO**
'Their (non-human) life.'

2.2.1.4.2 The associative plural suffix *-i*

Eegimaa has an associative plural suffix, which attaches to proper names (see (5)), personified non-human entities (6), and kin terms (7). The typical meaning of associative plurals is 'X and associates' (Daniel & Moravcsik 2013; Corbett 2000), where X stands for the main referent of a heterogeneous group. In (6), for example, the group is composed of a named animal and other animals of different kinds. Eegimaa singular nominals, which take the associative plural, trigger plural agreement, as can be seen in examples (5) to (7).

(5) Ámbulat-i gu-mund-e gu-jow
Ámbulat(I.SG)-ASSOC I.3PL-do.first-CPL I.3PL-go
'Ámbulat and his companions were the first to go.'

(6) Já-nuhureŋ-i googe ban gu-kkan
CLja-animal(I.SG)-ASSOC I.3PL.say.CPL IMM.FUT I.3PL-do
bu-ffutor
CLbu-association(III.SG)
'Animal and his companions decided that they would form an association.'

(7) pay-om-i gu-mund-e gu-jow
father(I.SG)-1SG.POSS-ASSOC I.3PL-do.first-CPL I.3PL-go
'My father and his companions were the first to go.'

2.2.1.4.3 The inactualis nominal TAM suffix -en

The inactualis suffix *-en* combines with nouns (and also verbs, as discussed in 2.3.1.4.5) and functions as a nominal tense marker expressing the meaning of

'past' (see Nordlinger and Sadler 2004 for a typology of nominal tense systems). For example, it can attach to a noun like *yaŋ* 'house', as in (8), to indicate a 'former' function.

(8) dáuru y-aŋ-en
this CLe-house-INACT
'This is a former house.'

In possessive constructions, it attaches to the head (the possessum) and expresses an alienability contrast (Haspelmath 2017) with the meaning of 'former'. With kinship terms, it combines with nouns denoting relatives by marriage (see (9)a), where the relationship can be terminated, but not with consanguineal kinship terms as in (9)b. The only way (9)b can be interpreted is in a joking context.

(9) a. aar-en Nestor
[CLA-]wife-INACT Nestor
'Nestor's ex-wife.'

b. ??a-ññol-en Nestor
CLa-child-INACT Nestor
'Nestor's former child.'

The inactualis is not acceptable with body part terms even in the case of amputation (see (10)b). It is acceptable, however, in constructions where a relationship of ownership can be terminated, as in (10)a. Without the *-en* suffix, (10)a would mean 'Nestor's house'.

(10) a. y-aŋ-en Nestor
CLe-house-INACT Nestor
'Nestor's former house.'

b. *ga-ñen-en Nestor
CLga-hand-INACT Nestor
'Nestor's former hand.'

2.2.1.5 Nominal suffixal derivation

2.2.1.5.1 The life stage suffix *-e*

The suffix *-e* is an unproductive derivational suffix, which has been found on the three nouns presented in (11), used to denote life stages.

(11) fi-ññil-e 'childhood'
fu-pput-e 'early childhood'
fu-ffan-e 'adulthood'

It is productive when used with stative verbs (see (12)) to derive abstract nouns describing a state or condition that the verb refers to.

(12) ma-pul-e ‘rot/that which is rotten’
má-sup-e ‘hot part/that which is hot’
má-ssum-e ‘good/that which is good’

2.2.1.5.2 Argument nominalisation

The main argument nominalisations (see Sagna (2008) for details) include agentive nouns formed with the suffix *-a* (13), instrumental nominalisations formed with the suffix *-úm* (14), manner nominalisations formed with the circumfix *ba-. . .-er* (15) and abstract noun formation with the suffix *-ay* (cf. (16)).

(13) á-kkuj-a ‘wrestler’ a-rem-a ‘drinker’

(14) fi-hiç-um ‘pen’ fú-rovv-um ‘seat’

(15) ba-lluj-er ‘manner of looking’ ba-bog-er ‘manner of dancing’

(16) e-ssum-ay ‘joy’ ma-mandiŋ-ay ‘the Mandinka way’

2.2.1.5.3 Denominalisation

Additional morphological properties that distinguish many Eegimaa nouns from verbs include their ability to combine with the verbaliser suffixes *-en* and *-et*[10] as part of a denominalisation process.[11] This is exemplified in Table 6. Nominal monocategorial stems can only be found in predicate function after a verb is derived through denominalisation. Denominal verbs behave like verbs in all aspects, i.e. they take NCPs in their non-finite forms and all verbal inflectional markers in their finite forms (See 2.3).

10 Some of the verbs derived through denominalisation undergo stem modification. For example, the root *-ar* ‘stomach’ becomes *-fatt* ‘stomach’, where the trill /r/ turns into a geminate /tt/ in *e-fatt-en* ‘to impregnate’. Note that the singular prefix seems to attach to the derived verbal stem. Another case of stem alternation during verbalisation is with the noun root *-u* ‘oyster’ whose derived verbal form *bu-ssu-et* ‘collect/collecting oysters’ is formed by what seems to be a modification of the plural noun form *su-u* ‘oysters’, which becomes *-ssu*.

11 The suffix *-en* is the causative suffix which in this case functions as a verbaliser. Its basic meaning of ‘make/cause to X’ is still preserved when it derives verbs from nouns. As for the verbaliser *-et*, it is a polysemic suffix with meaning such as ‘be covered with X’, ‘be (in state) X’ and ‘collect X’.

Table 6: Denominalisation with monocategorial roots.

Monocategorial root	Gloss	Denominal verbs	Gloss
-ar	'stomach'	-fatt-en	'to impregnate'
-mmoh	'fist'	-mmog-en	'to monopolise'
-hon	'dirt'	-hott-en	'to make (sth) dirty'
-fal	'body hair'	-fal-et	'to have body hair'
-soŋ	'mad person'	-soŋ-et	'to be mad/stupid'
-u	'oyster'	-ssu-et	'to collect oysters'
-mangu	'mango'	-mangu-et	'to pick up mangoes'

Eegimaa nouns can only function as predicates in verbless (ascriptive/equative) clauses. Monocategorial nominal stems are incompatible with a number of verbal inflectional markers like the verbal negation suffix *-ut*.[12] Example (17) illustrates the use of the negative suffix *-ut* with a verb, whereas example (18) shows that any combination of this suffix with a monocategorial noun results in an ungrammatical sentence.

(17) Verbal negation expressed on the verb *-gor* 'touch'
a-gor-ut w-af
I.3SG-touch-NEG CLW-thing
'S/he has not touched anything'

(18) Ungrammatical use of negative suffix *-ut* with the noun 'head'
*a-how-ut w-af
I.3SG-head-NEG CLW-thing
'S/he has not headed anything'

Eegimaa nouns can also be distinguished from verbs based on their syntactic properties. They can function as heads of noun phrases and trigger NP-internal agreement on targets such as determiners, adjectives like *-vvugul* 'new' as, in example (19). Recall that the definite determiner must be repeated twice, after the noun and the adjective, in an NP modified by an adjective. Eegimaa nouns also control agreement in gender and number on verbs as illustrated and (20).

12 The Inactualis *-en* is an exception. This suffix can combine with alienable nouns to express past possession and with verbs to express the meaning of past tense. Apart from this suffix, which I have analysed as an instance of nominal tense marking, no other TAM suffix is compatible with nominal stems.

In these examples, the noun *e-jjamen* 'goat' is the head of the NP and the gender agreement it controls is indicated by the boldface of the agreement markers (See Chapter III for a detailed study of syntactic and semantic agreement in Eegimaa).

(19) e-jjamen **ya**y**u** **e-**vvugul **ya**y**u**
CLe-goat(II.SG) **II.SG.**DEF **II.SG**-new **II.SG.**DEF
'The new goat.'

(20) e-jjamen **ya**y**u** **e-**bugor-e
CLe-goat(**II.SG**) **II.SG.**DEF **II.SG**-give.birth-CPL
'The goat has given birth.'

Nouns, unlike verbs, discussed in the next section, occur in argument position as is exemplified in example (20) with the noun *e-jjamen* 'goat' in subject position.

In sum, the discussion above shows that Eegimaa has a class of monocategorial nominal stems. These forms are pre-classified as nouns in the Eegimaa lexicon, and their classification is rigid both at the level of the stem and at the level of the word form. Monocategorial nouns cannot take the verbal inflections discussed below and cannot be used as verbal predicates. The recognition of a monocategorial class of nouns is not debated in African languages. However, the recognition of a rigid class of verbal lexemes has been more controversial in African linguistics, especially when viewed from the perspective of Houis's (1981) approach to parts of speech in Mande, which was generalised to other African languages.

2.3 A class of monocategorial verbal lexemes

2.3.1 Basic verbal morphology

Eegimaa has a monocategorial class of verbs, which exhibit very few nominal properties, compared to the nouns discussed above and verbo-nominals discussed in Section 2.4.

2.3.1.1 Verbal morphology schema

The minimal structure of the verbal word in Eegimaa is prefix+stem, as in the imperative *u-tiñ* 'eat (2SG)'. The maximal structure of the verb is broadly characterised in the position class diagram in Table 7. The diagram presented here is not intended as a complete, fine-grained presentation of the suffix slots. Rather it is provided to give the reader a sense of the complex structure of the verbal

morphology. All the slots presented here can be filled on a single verb. Note that Safir and Bassene (2014) provide a different and more detailed analysis of the affix-ordering rules in Eegimaa.

Table 7: Broad characterisation of the morphological structure of the Eegimaa verb.

SUBJ M.	VERB ROOT	DERIV1	DERIV2	DERIV3	TAM	VEN	NEG	OBJ M. /PASS	REDUP

The diagram shows that in the finite form of the verb, the verb root is preceded by the subject marker, and followed by different verb extensions. As shown in (21) and (22), the verb root (in boldface) is followed by the causative suffix *-en*, which fills a slot (Deriv1) that can also be occupied by the middle suffix *-o*. The second slot (Deriv2), which is filled by the reciprocal suffix *-or* in the examples given here, can also be filled by the reflexive *-oro*. It is followed by the 'anticipative' suffix, which occurs in the Deriv 3 slot and which describes an event which took place earlier, before a given time. The TAM slot is filled by suffixes such as the inactualis/ non-factual marker *-en* and the completive marker *-e*. The 'VEN' slot is filled by the venitive suffix *-ul* 'towards the speaker' or the venitive completive *-ulo* 'completed before moving towards the speaker'. In a negation construction, as in example (21), the negative suffix *-at* must follow the venitive if they co-occur, followed by the passive suffix *-i*. Depending on the context, the object marker can occur in the slot where the passive is found.

(21) si-vval sasu
CLsu-stone(II.PL) II.PL.DEF
sú-**hol**-en-or-ali-en-ul-at-i
II.PL.DEF-**stick**-CAUS-RECIP-ANTIC-INACT-VEN-NEG-PASS
'The stones were not stuck together earlier.'

In case of verb reduplication in an affirmative clause, the venitive or venitive completive can be followed by an object marker like *-so* and the reduplicated stem (e.g. *-hol-en-or* 'stick together'), with the Deriv1 and Deriv2 slots also filled. This is exemplified in (22), where the reduplicated verbal stem is in boldface.

(22) gu-**hol**-en-or-ali-en-ulo-so-**hol**-en-or
II.PL.DEF-**stick-**CAUS-RECIP-ANTIC-INACT-VEN.CPL-II.PL.PRO-**stick**-CAUS-REC
'They stuck them together early (and came back).'

As pointed out above, these examples are intended to show the complexity of Eegimaa verbal morphology rather than provide a full account of the structure of the verb.

2.3.1.2 Verbal prefixes

2.3.1.2.1 Subject markers

In their finite form, verbs take subject markers, which, in the third person, show agreement in gender, number and person with an antecedent noun that may or may not be present in the clause (see (23) and (24)). The verbal prefix *a-* marks Gender I and third person singular.

(23) a-ppal-om a-let
CLa-friend-1SG.POSS(I.SG) I.3SG-not.be
'My friend is absent.'

(24) a-let
I.3SG-not.be
'S/he is absent.'

2.3.1.2.2 NCPS on non-finite verbs

Verbs take NCPS to form non-finite verbs, the equivalent of forms such as infinitives and verbal nouns (masdars), as exemplified in (25). These NCPS occur in the same slots as subject markers discussed in 2.3.1.2.1. Most chapters in this book investigate the morphosyntactic and semantic properties of these combinations of NCPS with verbs, and the link between the nominal and verb classification systems.

(25) e-let 'to not be'
ma-sur 'to urinate'
gá-mmori 'to sleep'

2.3.1.3 Verb extensions

2.3.1.3.1 Summary of verb derivational suffixes

The most common Eegimaa derivational suffixes are summarised in Table 8. The verb suffixes presented here include those used in valence changing operations like the passive, which, strictly speaking, may not be classed as derivational because they do not create new lexemes (Spencer 2013).

Table 8: The most common verb extensions.

Extensions	Label	Examples	Gloss	Translation
-úl	Venitive	é-pur-ul	CLe-go.out-VEN	'come out'
-ul	Reversative	e-gub-ul	CLe-cover-REV	'uncover'
-úm	Directive	é-jow-um	CLe-go-DIR	'go through'
-áli	Anticipative	é-kkan-ali	CLe-do-ANTIC	'do early'
-akken	Repetitive	é-ssil-akken	CLe-cook-REP	'cook another time'
-en	Causative	e-rokk-en	CLe-work-CAUS	'make work'
-o	Middle	e-jal-o	CLe-unfasten-MID	'unfasten'
-or	Reciprocal	bu-jug-or	CLbu-see-RECIP	'see each other'
-oro	Reflexive	e-kkan-oro	CLe-do-REFL	'do for oneself'
-i	Passive	e-saen-i	CLe-burn-PASS	'it hast been burnt'

2.3.1.3.2 Pluractional verbs

Eegimaa has an unproductive derivational strategy of reduplication, as exemplified in (26). The derived reduplicated lexemes are 'pluractional' verbs which describe a multiplicity of actions (Newman 1990: 53–54). Chapter VI investigates another manifestation of pluractionality expressed by the use of plural and collective NCPs on non-finite verbs.

(26)

e-tey	'run'	e-teteyor	'run from place to place'
e-ber	'laugh'	e-bebberor	'spend time laughing'
e-maen	'touch'	e-mamaen	'palpate'

2.3.1.3.3 Derivation by stem alternation and prefix change

An interesting but as yet unstudied aspect of the lexicons of Jóola languages is a derivational process that combines [ATR]-based stem alternation and prefix change as exemplified in Table 9. All the verbs in the "-ATR realisation" section of the table take the prefix *e-* as a marker of non-finiteness. Nouns or action/state nominalisations like those on the right-hand side of the table (+ATR realisation) are derived from the same verbal roots through a process that includes a change in prefix and a modification of the stem vowels from [-ATR] to [+ATR], as indicated by the acute accent on the first vowel of the derived words. This process cannot be captured by the synchronic phonological rules, nor by any morphological rule of concatenation. I leave this issue for future research.

Table 9: Alternations between [+ATR] and [-ATR] in derivations.

-ATR realisation		+ATR realisation	
e-emor	'to meet'	bí-emor	'to encounter/confrontation'
e-yab	'to receive/to marry'	bú-yab	'to marry/marrying'
e-yab	'to receive/to marry'	bú-yabo	'to get married/marriage'
e-eh	'to say'	bú-oh	'saying'
e-eh	'to say'	bú-ogor	'to quarrel/quarrelling'
e-cceŋor	'to debate/fight over something'	sí-cceŋor	'debating'
e-omen	'to assemble'	já-omen	'gathering cattle'
e-llar	'to work'	bú-llar	'work/job'

2.3.1.3.4 Noun to verb causative formation with *-en*

The causative suffix *-en* can also be used less productively with noun stems to derive verbs with the meaning of 'make an X' or 'put X on something', as in (27).

(27) á-vvi 'king' já-vvi-en 'enthrone a king'
é-lluh 'mud' é-llutt-en 'put mud on'

2.3.1.3.5 The polysemous verbaliser *-et*

Denominal verbs can be derived from nouns using the productive verbaliser *-et*. The meanings of the derived forms include 'collect X' or 'be X', as illustrated in (28).

(28) e-soŋ 'mad person/fool' bu-soŋ-et 'be a fool'
fu-mangu 'mango' ga-mangu-et 'pick up/collect mangoes'

2.3.1.4 Survey of the TAM system

The tense-aspect-mood marking of Jóola languages in general is very poorly understood, and its interaction with lexical aspect has never been subject to any investigation. In this section I provide a brief survey of the Eegimaa TAM system.

2.3.1.4.1 The completive *-e*

The completive *-e* (*l'accompli* in (Bassène 2007)) combines with dynamic verbs to describe events that are carried out thoroughly and to completion, and in which the object is totally affected (Bybee et al.1994). This is illustrated in (29), where the 'baobab tree' is totally affected by the action carried out (to completion) by the subject-agent *Jiñappu*.

(29) Jiñappu n-a-bel-e bu-bah babu
Jiñappu(I.SG) REAL-I.3SG-fell-CPL CLbu-baobab(III.SG) III.SG.DEF
'Jiñappu has felled the baobab tree.'

With stative verbs, the suffix *-e* indicates emphasis or surprise, which is a property of completives (Bybee et al. 1994). This is exemplified in (30).

(30) Jiñappu n-a-soŋet-e!
Jiñappu(I.SG) REAL-I.3SG-be.stupid-CPL
'Jiñappu is (really) stupid!'

2.3.1.4.2 The perfective aspect – reduplication

Verbal stem reduplication is a strategy used to express perfective meaning. With the perfective, the event may or may not be completed but is construed as a complete unit (Frawley 1992). This is exemplified in (31) and (32), which report bounded events with no real relevance to the current situation.

(31) Jiñappu n-a-be-bet bu-bah babu
Jiñappu(I.SG) REAL-I.3SG-fell-REDUP CLbu-baobab(III.SG) III.SG.DEF
'Jiñappu has felled the baobab tree.'

(32) Jiñappu n-a-bba-bah
Jiñappu(I.SG) REAL-I.3SG-be.tall-REDUP
'Jiñappu is tall.'

2.3.1.4.3 The venitive-completive *-ulo*

The venitive-completive *-ulo*, exemplified in (33), is a TAM suffix composed of the venitive *-úl* and the middle suffix *-o*. It indicates completion of a situation away from the here and now, but whose results are evident from the deictic centre.

(33) Jiñappu n-a-lo-ulo
Jiñappu(I.SG) REAL-I.3SG-fall-VEN.CPL
'Jiñappu fell down where he was' (he is here now).

2.3.1.4.4 The habitual suffix *-e*

The habitual suffix *e-* occurs only between the base and the reduplicant, as in (34). When habitual aspect is expressed by verbal morphology it is negated with the verbal suffix *-érit* (see (35)).

(34) Jiñappu n-a-lo-e-lo
Jiñappu(I.SG) REAL.I.3SG-fall-HAB-fall
'Jiñappu (habitually) falls.' (Epileptic crisis)

(35) Jiñappu á-lo-erit
Jiñappu(I.SG) I.3SG-fall-HAB.NEG
'Jiñappu does not (habitually) fall.'

The habitual aspect can also be expressed analytically using the free morpheme *nahi* and its negative equivalent *indi* (see (36) and (37)).

(36) nahi gu-roddokk ni fuh
HAB I.3PL-work.REDUP PREP CLf-night(IV.SG)
'They work at night.'

(37) indi gu-rokk ni bu-jom
HAB.NEG I.3PL-work PREP CLbu-morning(III.SG)
'They do not work in the morning.'

2.3.1.4.5 The inactualis TAM suffix *-en*

The inactualis suffix *-en* combines with both nouns and verbs, as pointed out in 2.2.1.4.3. With verbs, it expresses the meaning of past, and describes events or states which are no longer true, as in (38). In counterfactual conditional clauses, as in (39), it combines with the verbs in both the 'if clause' and the 'then clause', to refer to an event which failed to happen.

(38) pay-om n-a-ju-en-e já-kkuj
father(I.SG)-1SG.POSS REAL.I.3SG-be.able-INACT-CPL CLja-wrestle
'My father was good at wrestling.'

(39) ú-pur-en-ut me pan u-jug-en-ol
2SG-go.out-INACT-NEG NEG FUT 2SG-see-INACT-3SG. OBJ
'If you hadn't gone out you would have seen him/her'

2.3.1.4.6 The anterior marker *ba-. . .-er*

The prefix *ba-* and the suffix *-er* (also realised in free variation as *mba-. . .-er*)[13] jointly occur in the same verbal stems to express meanings which are cross-linguistically associated with the pluperfect (see (40)) or the future perfect (41). They signal past or future events which are relevant to another past or future event (see e.g. Bybee 1985).

(40) ni-ttog-ol o ba-yog-er
REAL.1SG-find-3SG.OBJ I.SG.PRO CLba-be.tired-PERF
'(When I arrived) I found that he was already tired.'

(41) pan i-ttogol o ba-kkay-er
FUT 1SG-find-3SG.OBJ I.SG.PRO CLba-leave-PERF
'I will find him already gone.'

Though the prefix *ba-* and the suffix *-er* co-occur, I do not analysed them as TAM circumfixes, since the suffix *-er* can occur independently, as in (42), to describe anteriority comparable to the experiential perfect (Comrie 1976).

(42) nu-und-er-e a-cce gu-fog-e ni
REAL.2SG-hear-PERF-CPL I.SG-other I.3PL-bury-CPL PREP
sí-ralam-ol?
CLsu-money(II.PL)-3SG.POSS
'Have you ever heard that someone has been buried with their money?'

2.3.1.4.7 Verbal negation

Verbal morphology is a common way to mark negation in African languages (Watters 2000; Childs 2003; Creissels et al. 2008). Three suffixes can mark negation in Eegimaa. The suffix *-ut/-at* negates declarative sentences describing properties, as in (43), or occurrences, as exemplified in (44).

(43) Appu a-bbag-ut
Appu(I.SG) I.3SG-be.tall-NEG
'Appu is not tall.'

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13 As can be seen in example (42) the suffix *-er* can appear without the prefix *ba-* in the expression of anteriority. Thus, it should be distinguished from the construction *ba- . . . -er* in example (15), which functions as a circumfix only in the context of the derivation of manner nominalisation, a context in which the elements *ba-* and *-er* cannot be separated.

(44) Appu a-tiñ-ut
Appu(I.SG) I.3SG-eat-NEG
'Appu has not eaten.'

The suffix *-érit* marks negation of habitual aspect, as exemplified in (45).

(45) Appu á-tiñ-erit
Appu(I.SG) I.3SG-eat-NEG.HAB
'Appu does not eat.'

Eegimaa also has a negative suffix *-erut*, which may be glossed as 'not yet' and which expresses the idea that an event has not yet occurred, as in (46).

(46) Appu a-tiñ-erut
Appu(I.SG) I.3SG-eat-NOT.YET
'Appu has not eaten yet.'

2.3.1.4.8 The future

The future is formed with the particles *pan* and *ban,* which express 'general future' and 'immediate future', respectively (see (47) and (48)). Both general and immediate future expressions are negated using the particle *mati* (49).

(47) pan i-lob ni ja-om
FUT 1SG-speak PREP mother(I.SG)-1SG.POSS
'I will speak with my mother.'

(48) ban i-lob ni ja-om
IMM.FUT 1SG-speak PREP mother(I.SG)-1SG.POSS
'I am going to speak with my mother.'

(49) mati i-lob ni ja-om
NEG.FUT 1SG-speak PREP mother(I.SG)-1SG.POSS
'I will not/ I am not going to speak with my mother.'

The verbal affixes discussed in the sections above are important tools to distinguish between nouns and verbs in Eegimaa. Nouns do not combine with verbal inflectional markers, while verbs in their finite forms cannot take nominal affixes. Only the inactualis is found on both nouns and verbs.

2.3.2 Verbal lexemes

The debate on the noun-verb distinction has been ongoing in African linguistics, especially in the description of Mande languages, where many authors have argued that these languages only distinguish lexical classes of monocategorial nouns and verbo-nominals (verbal nouns), but no lexical class of monocategorial verbs was initially recognised (Houis 1981; Creissels 1983; and Vydrine 1999 for a survey). It is important to note that the part-of-speech indeterminacy between noun and verbs was only recognised at the lexical level. There is, however, a general agreement among authors that nouns can be distinguished from verbs at the syntactic level using distributional criteria.

In Houis's (1981) argument, lexemes that belong to the traditional class of verbs should be analysed as flexible words in both Mande and many other African languages and be assigned, as a result, to a word class category he labelled verbo-nominals. Verbo-nominals are polycategorial lexemes that can be used in nominal and verbal functions without any further derivational morphology (Creissels 2017) that would differentiate action-denoting forms from object-denoting ones. Houis's (1981) research was particularly influential in the analysis of the parts-of-speech distinctions, not only in Mande languages, but also on other African languages such as Jóola Foñi as described by Hopkins (1995). Foñi, has a nominal classification system where, similar to Eegimaa, stems must combine with NCPs (except with a few prefixless nouns). In a language like this one, the question is whether the flexibility of these forms should be recognised at the stem level or at the lexeme level. Hopkins (1995: 35) argues that in Foñi, almost all lexemes normally classified as verbs are verbo-nominals because they also have nominal properties. His description only recognises a class of nouns and a class of verbo-nominals in the Jóola Foñi parts-of-speech system.

In a re-evaluation of Houis's approach to parts-of-speech, Creissels (2017) argues for the recognition of a category of verbal lexemes in the Mandinka (a Mande language) parts-of-speech system, in addition to the already established nouns and verbo-nominals. He defines a verbal lexeme as a form that "can be used in its non-derived form as the verbal head of predicative constructions, and its only possible meaning as the head of noun phrases is that of event nominalisation."

In the analysis presented here, I argue that, unlike Jóola Foñi (see Hopkins L. 1995), a category of verbal lexemes must be recognised for Eegimaa, in addition to a monocategorial class of nouns and that of flexible words (verbo-nominals) discussed in Section 2.3. This would place Eegimaa in the category of languages that make the noun/verb/flexible parts-of-speech distinctions (Luuk 2010). Eegimaa

verbal lexemes have the following characteristics which are discussed in more detail below.

a. Typical verbal properties of monocategorial verbs, include occurring in finite context and taking verbal inflections (see Section 2.3.1 above).
b. In their non-finite form, verbs tend to take one NCP, generally NCP *e-* as their only prefix. If they take another NCP, meaning that they belong to another morphological class, NCP *e-* will be used only in the context of event individuation (See Chapter VII).
c. Verbal lexemes cannot occur in argument position in their non-finite forms unless they can be interpreted as entire clauses. Transitive verbs, in this context, must take an object, as in example (51). This criterion sets them apart from nouns and verbo-nominals, which can occur in those positions without further specifications.

The class of Eegimaa verbal lexemes is a category of lexemes specialised in verbal predicate functions. They have restricted nominal properties compared to monocategorial nouns and verbo-nominal lexemes discussed in Section 2.4. As criterion b) points out, morphologically, Eegimaa verbal lexemes are composed of stems that are generally compatible with only one NCP in their non-finite form, and this prefix is generally NCP *e-*, though other NCPs can also be used. Taking a noun class prefix in their non-finite forms is one of the rare morphological properties that verbal lexemes share with nominal lexemes. This is exemplified with verbs like *e-sen* 'give', *é-rien* 'to hang down', and *e-lat* 'to refuse' which take NCP *e-*.

Non-finite verbs can function as the predicates of complement clauses, and these clauses can fill argument positions of a finite verb. A major difference between verbal lexemes and nouns or flexible words (verbo-nominals) is, as criterion c) indicates, that the former cannot occur in isolation as subject arguments, even in their non-finite forms, as exemplified by the uninterpretable sentence in (50), which has a transitive verb. On its own, a non-finite verb of the category of verbal lexemes can only be used as argument if it can be interpreted as an entire clause (e.g. if it is intransitive). Example (51) illustrates the use of a non-finite transitive verb from this category, occurring in subject argument position and taking an object.

(50) Odd use of a non-finite verbal lexeme in subject position with no object
??e-pos é-ssum-ut
CLe-wash(II.SG) II.SG-be.easy-NEG
'Washing is not easy.'

(51) Attested use of a non-finite verbal lexeme in subject position with an object

e-pos	é-otor	é-ssum-ut
CLe-wash(II.SG)	CLe-car(II.SG)	II.SG-be.easy-NEG

'Washing a car is not easy.'

Verbal lexemes are also attested in argument position in their non-finite forms when they function as heads of relative clauses as illustrated in examples (53) to (55), where relative markers, relative pronouns, are highlighted in boldface. In this case, the non-finite verb form of the intransitive verb can only be interpreted as meaning 'the fact, the act of *verb-ing*'. Example (52) illustrates an independent transitive clause on which the relative clause in (53) is based.

(52) Independent clause with the verb 'hand down.'

ga-an	gagu	gú-rien-e	é-rien !
CLga-branch(V.SG)	V.SG.DEF	V.SG-hang.down-CPL	CLe-hang.down(II.SG)

'The branch is hanging down a lot!' (ss060325_ab)

(53)

é-rien	yayu	[**y-o**	ga-an
CLe-hang.down(II.SG)	II.SG.DEF	**II.SG-PRO.REL**	CLga-branch(V.SG)
gagu	gú-rien	me]	e-kkan-e
V.SG.DEF	V.SG-hang.down	SUBORD	II.SG-do-CPL

'Lit: The hanging down that the branch hangs down is the reason.'
(It is because the branch is hanging down).

The noun *ga-an* 'branch' is a noun from Gender V and triggers agreement in gender and singular number on the definite article that modifies it and on the verb. Note, in passing, that the duplication of the verb in examples (52) and (53) is a manifestation of cognate head dependent construction, a "syntactic configuration in which the finite lexical verb form heading the predicate of a clause licenses a dependent phrase that comprises an etymologically and lexically related (deverbal) noun or non-finite verb" (Bond & Anderson 2014: 215).

Eegimaa relative clauses occur in postnominal position as is typical in VO languages. In example (53), the intransitive non-finite verb *é-rien* 'hang down', which is modified by the definite article *yayu* 'II.SG.DEF', is the head of a relative clause and functions as the subject of the main-clause verb *e-kkan-e* 'do'. It triggers agreement in Gender II and in singular number on the definite article on the main-clause verb. Within the relative clause, the relative pronoun functions as an object relativiser, and shows agreement in gender and number (Gender II, singular) with its antecedent, the non-finite verb *é-rien* 'hang down'. The verb 'hang down' is used again within the relative clause in its finite form, as indicated

using the prefix *gú-*, where it functions as a predicate, agreeing in gender and number with its subject. Note that the subject of the relative clause can be left unexpressed as it can be recovered from the context. As can be seen in example (54), the non-finite verb can also occur without a definite article.

(54) é-rien [**y-o** gú-rien-e]
CLe-hang.down(II.SG) **II.SG-PRO.REL** V.SG-hang.down-CPL
é-gga-gat!
II.SG-pass-REDUP
'The way it hangs down is too much!' (It is hanging down too much)

(55) e-oh bu-sun yayu [**y-o** gu-oh
CLe-dig(II.SG) CLbu-hole(III.SG) II.SG.DEF **II.SG-PRO.REL** I.3PL-dig
me] figen
SUBORD yesterday
'Lit: The digging of the pond which they did yesterday.' (ss24052009_Hono)

Example (56) illustrates a case where a non-finite verbal lexeme occurs in complement position after the desiderative complement-taking predicate 'want', a position where nominals are also expected.

(56) ga-an gagu gu-maŋ-e é-rien
CLga-branch(V.SG) V.SG.DEF V.SG-want-CPL CLe-hang.down(II.SG)
bi n'e-ttam
to PREP'CLe-ground
The branch is nearly hanging (lit: wants to hang) down to the ground.
(ss20140819_AmT)

In their non-finite forms, verbal lexemes can also take definite determiners just like typical nouns as can be observed in examples (53) and (55). However, they cannot be modified by any of the small number of Eegimaa adjectives.[14] This is shown in (57), where the use of the adjective *-amah* 'big' as a modifier for the verbal lexemes *é-rien* 'hang down' in nominal use results in an ungrammatical sentence. Note that in Eegimaa, when a definite NP is modified by an adjective, the definite determiner follows the noun, and must also be repeated after the postnominal adjective.

14 There are around twenty adjectives in Eegimaa, but none of these is semantically compatible with verbal lexemes tested so far.

(57) Incompatibility of verbal lexemes with adjectives

*e-ríen	yayu	y-ámah	yayu
CLe-hang.down(II.SG)	II.SG.DEF	II.SG-big	II.SG.DEF

'Lit: The big hanging down.'

In their finite forms, verbal lexemes are morphologically characterised by their ability to combine with verbal inflections, as exemplified in (58) and (59). They take tense-aspect-mood markers like the completive *-e*, and verbal agreement markers such as the prefixes *gu-* exemplified in (58), and the third person singular prefix marker *na-* in (59), showing agreement in gender and number with the controller nouns *ga-* an 'branch' in (58), and also in person with the human proper noun Appu. A more detailed discussion of the inflectional properties of verbs is provided in 2.3.1.

(58) Combination of a verbal stem with an agreement marker and the completive suffix

ga-an	gagu	gú-rien-e	mámah
CLga-branch(V.SG)	V.SG.DEF	V.SG-hang.down-CPL	very.much

'The branch is hanging down a lot.' (ss060325_ab)

(59) Combination of a verbal stem with a person agreement marker and the completive suffix

Appu	n-a-tuj-e	ga-an	gagu
Appu(I.SG)	REAL-I.3SG-break-CPL	CLga-branch(V.SG)	V.SG.DEF

'Appu has broken the branch.'

Syntactically, verbal lexemes in their finite forms function as heads of clauses, take adverbs as modifiers, as exemplified in (58) with the degree adverb *mámah* 'very much', and take objects in transitive clauses as shown in (59).Verbal lexemes share the morphosyntactic properties discussed above with flexible stems in their verbal functions, but not with nouns, which are incompatible with these verbal affixes in this language.

Another property of verbal lexemes is that they can also combine with possessive suffixes in their non-finite form, just like nouns as illustrated in examples (60) to (62). In example (60), the suffix *-ol*[15] is an object index and its antecedent is the P argument but might be the A argument in highly specific contexts where it

15 Object indexes are formally identical to possessive suffixes and may be seen as the same form having different functions on different word classes.

is clear that the one doing the taking is the agent. If an overt object is added to the sentence, however, as in (61), the antecedent is understood as the A argument, and the suffix may be glossed as possessive marker. This interpretation resembles one where the possessive suffix attaches to a noun which functions as a possessor as exemplified in (62).

(60) e-ŋar-ol e-roŋ-e
CLe-take-3SG.POSS(II.SG) II.SG-remain-CPL
'Lit: his/her taking is the only thing left' (Taking him/her is the only thing left)

(61) e-ŋar-ol e-llu e-roŋ-e
CLe-take-3SG.POSS(II.SG) CLe-meat(II.SG) II.SG-remain-CPL
'Lit: his taking of meat has not arrived' (It is not yet time for him to take meat)

(62) e-llu-ol e-mmeŋ-ut
CLe-take-3SG.POSS(II.SG) II.SG-be.much-NEG
'Lit: His meat is not much' (He does not have much meat)

To summarise, the discussion of verbal lexemes, Eegimaa verbal stems are compatible with typical verbal markers like tense-aspect-mood markers in their finite forms. They also have some nominal morphological properties in their non-finite forms, mainly by combining with noun class prefixes, generally the default NCP *e-* and possessive suffixes, but these nominal properties are very restricted. Syntactically, Eegimaa non-finite verbal lexemes can head relative clauses and take definite determiners in these contexts. The restricted nominal properties of verbal lexemes are the main features that separate verbal lexemes from Eegimaa verbo-nominals, which can readily occur as argument phrases without the need to be modified, unlike verbal lexemes. Note that the class of verbal lexemes is less rigid than the monocategorial class of nouns, because the latter never take verbal markers, whereas the former take some nominal markers. Verbal stems are, however, less flexible than polycategorial stems of verbo-nominals, which are examined in Section 2.4, because of the former's need to take an object, if transitive, or be interpreted as an entire clause (especially with intransitive verbs) before occurring in nominal context.

2.4 Flexible stems and flexible lexemes

The debate on word class flexibility in the typological literature is linked to the controversy on the universality of noun-verb distinction in the languages of the world (Evans & Osada 2005; Croft 2005; Don & van Lier 2013). Scholars working on parts-of-speech systems are divided between those who argue that all languages make a distinction between nouns and verbs (Baker 2003; Croft 2003; Schachter & Shopen 2007; Whaley 1997) and those who argue that some languages lack the noun-verb distinction in their parts-of-speech systems (see e.g. Broschart 1997; Gil 1994; 2013; Hengeveld 1992). For other languages, the categories of nouns and verbs are distinguished, but a third category of flexible words, which have the ability to function as nouns and verbs, is also recognised (see e.g. Don & van Lier 2013; Luuk 2010; Rijkhoff & van Lier 2013). The latter analysis is the one I adopt for Eegimaa.

Flexibility in Eegimaa is mainly found with noun and verb roots/stems and words forms, but it can also occur with other parts-of-speech. There are, for example, flexible stems that can function as verbal stems and as manner adverbs. Example (63) illustrates the use of the bare flexible stem *hóji* 'be ugly/badly' as an adverb modifying a finite verb,[16] whereas in example (64) the same stem is found as a verb which takes verbal inflections such as Gender II agreement, as well as the completive TAM suffix *-e*.

(63) n-a-lob-e hóji
REAL-I.3SG-speak-CPL ugly
'S/he spoke badly (lit: in an ugly fashion)'

(64) e-lob-ol e-hóji-e
CLe-speech(II.SG)-3SG.POSS II.SG-be.ugly-CPL
'His speech/word was ugly (bad)'

For some words, flexibility is only found at the level of the stem, whereas for others, it is found both at the level of the stems and the word forms. The focus here lies on flexibility between nouns and verbs both at the stem level and at the level of the word forms. These differences in flexibility are discussed below.

16 In their bare forms, many stative verbs denoting property concepts are used to form manner adverbs in Eegimaa.

2.4.1 Flexible and uncategorised stems

The main subtypes of stem flexibility have been observed. A complementary discussion of this phenomenon is provided in Chapter IV, in the investigation of the morphosyntactic properties of these forms, and in the context of NCP alternations on non-finite verbs. This section focusses on the use of stem in different word classes, and on the combinations between those stems and NCPs. In the first case scenario, as shown below in Section 2.4.1.1, the same stem is found in a flexible word form that functions as a noun and a verbo-nominal. Second, as discussed in 2.4.1.2, the same stem is found in a verbal lexeme and two or more verbo-nominal lexemes taking different NCPs. Finally, as demonstrated in Section 2.4.1.3, the same flexible stem can be found on one verbo-nominal lexeme and several nominal lexemes.

2.4.1.1 A flexible stem occurs with verbo-nominal

Some stems like *-baŋen* 'trap' mainly combine with one NCP, *ja-* in this case. The resulting forms, e.g. *ja-baŋen* 'to trap/trapping', show flexibility both at the level of the stem and the word form. These word forms are verbo-nominal as illustrated in (65), which also have nominal properties exemplified in (66). The nominal form in these instances is a nominalised form of the verb. It is only in cases of event individuation, illustrated in (67), that the prefix *e-* is used with such stems.

(65) n-a-kka-e ja-baŋen gu-hurub
REAL-I.3SG-go-CPL CLja-trap CLgu-beaver(IV.PL)
'S/he has gone out to make traps to catch beavers'

(66) ja-baŋen jú-ssum-ut
CLja-trap(VI.SG) VI.SG-be.easy-NEG
'Trapping (animals) is not easy.'

(67) n-a-kka-e e-baŋen fu-hurub fafu
REAL-I.3SG-go-CPL CLe-trap CLfu-beaver(IV.SG) IV.SG.DEF
'S/he has gone out to catch the beaver with a trap.'

2.4.1.2 The same stem occurs in a verb and two or more verbo-nominal lexemes

The second subtype of stem flexibility manifests itself by the use of different NCPs to form two or more flexible verbo-nominal lexemes. Examples (68) to (70) illustrate three lexemes which are formed with the stem *-amben* which is

roughly glossed 'publicise'. This suggests that there are shared abstract semantic components between the three lexemes having the same stems. Example (68) shows the most verbal form of the three illustrations. It describes an event where the discovery of a lost telephone is expected to be announced loudly in public. Example (69) describes a ritual or its performance, which consists of the coming together of villagers who perform specific shouts to spiritually ward off a spell or a disease. Finally, example (70) is another form of uttering/revealing something loud, in this case it refers to speaking loud in one's dreams. The semantic differences in the use of different NCPs on the same stems is investigated in Chapter VI.

(68) a-maŋ-ut e-amben telefon yayu
I.3SG-want-NEG CLe-publicise telephone II.SG.DEF
'S/he does not want to publicise the telephone.'

(69) ban ji-kke ba-amben
IMM.FUT 1PL.EXCL-go CLba-publicise
'We are going to do the warding-off ritual.'

(70) umu ni si-amben
I.SG.COP PREP CLsi-publicise
'S/he is speaking in her/his dreams'

In some cases NCP *e-* or another NCP can combine with the same stem resulting in two different lexemes as exemplified in (71) and (72), where the root *-pah* is glossed 'escape' when it combines with NCP *e-* and 'be rude' when it takes NCP *ba-*. Note that these cases may be compared with the alternations shown in examples (68)-(70). However, they should be distinguished because the semantic distinctions in (68)-(70) are much closer to each other than the ones described in this paragraph. In example (71), *e-pah* 'escape' is a verbal lexeme which is similar to those described in Section 2.3, and which does not have a verbo-nominal counterpart equivalent to the English noun 'escape' or the gerund 'escaping'. *ba-pah* 'be rude/being rude/rudeness' on the other hand, is a verbo-nominal lexeme which almost always occurs with the prefix *ba-*. There is no available data (and this is also confirmed by elicitation and my native speaker intuition) showing the use of the root *-pah* with NCP *e-* in the sense of 'be rude/being rude/rudeness'.

(71) The root *-pah* taking NCP *e-* to yield the lexeme *e-pah* 'escape'
n-a-kkay-en t-o e-pah n-gu-jog-ol
REAL-I.3SG-leave-INACT VIII-PRO CLe-escape(II.SG) PREP-I.3PL-catch-3SG.OBJ
'S/he was about to escape but they caught her/him.' (Part-obsv-314)

(72) The root -pah taking ncp *ba-* to yield the lexeme *e-pah* 'be rude/being rude/rudeness'
n-a-kkay-en t-o ba-pah,
REAL-I.3SG-leave-INACT VIII-PRO CLba-rude(III.SG)
n-gu-çaf-ol
PREP-I.3PL-warn-3SG.OBJ
'S/he tried to behave rudely, but they warned him/her.' (Part-obsv-315)

2.4.1.3 The same flexible stem occurs in a verbo-nominal and several nominal lexemes

Sometimes a verbo-nominal and one or more nouns denoting concrete entities share the same stem while taking different NCPs. This is exemplified in (73) and (74), with the non-finite verb *ma-rem* 'to drink/drinking' and the plural noun *si-rem* 'drinks'.

(73) n-a-kka-e ma-rem bu-nuh
REAL-I.3SG-go-CPL CLma-drink CLbu-palm.wine(III.SG)
'S/he is gone out drinking palm wine'

(74) si-rem sousu sú-ssum-ut
CLsi-drink(II.PL) II.PL.DEM.MED II.PL-be.sweet-NEG
'These drinks are not sweet'

Other nouns that take the flexible stem *-rem*, also glossed 'drink' despite the lack of an obvious link with drinking, are illustrated in examples (75) to (77). These examples show that, in addition to the non-finite verb illustrated in (73), the stem *-rem* can be found with up to four nouns. The entities denoted by the nouns in these examples relate to liquids which can be drunk.

(75) bí-rem babu ubu
CLbu-drink(III.SG) III.SG.DEF III.SG.MED.COP
'Here is the Erythrophleum guineense (tree or extracted substance)"

(76) ga-rem gagu gu-ha-hay
CLga-drink(V.SG) V.SG.DEF V.SG-dry-REDUP
'The source is dry.'

(77) fi-rem fafu fu-ha-hay
CLfu-drink(IV.SG) IV.SG.DEF IV.SG-dry-REDUP
'The deep plot of rice field is dry.'

The question as to whether we are dealing with the same or different stems between examples (73) to (74), on the one hand, and examples (75) to (77), on the other hand, might arise in such a situation. Recall from Section 2.2.1.2, that NCPs can be used derivationally to form different nouns without the use of extra derivational material. Here, it is argued that NCPs are used in their derivational function to form the verbo-nominal form *ma-rem* 'drink/drinking' exemplified in (73), and to form the four nominal lexemes exemplified (74) and (77). We can posit here that the same stem is used, and it has an abstract meaning that relates to the concepts of 'liquid' and 'drinking'. Example (73), for instance, refers either to the Erythrophleum guineense tree, or to the poisonous liquid extracted from a concoction of its barks, which used to be drunk as part of a trial by ordeal.[17] Morphologically the noun in example (75) is formed by NCP change and by change in [ATR] feature, where the new noun takes [+ATR] vowels. In example (76), NCP *ga-* is used with *-rem* to form a noun which denotes a source where drinking water used to be fetched. Finally, example (77) where NCP *fi-* is used with the stem *-rem* denotes a deep plot of rice field. Up to recently Eegimaa people could also drink water from plots of rice fields in the rainy season if no other water is available. It is not clear whether drinking from the deepest plots was more common compared to the least deep ones, and if this could account the use of the stem *-rem* with this noun. The discussion in this section shows, as pointed out earlier that NCPs can be used derivationally to form new nominal lexemes. This derivational process is also possible with nouns that cannot function as verbo-nominals. Roots like *-rem* 'drink(v)/drinking/drink(n)' discussed in the examples above, are treated as flexible monosemic lexical stem with a vague meaning. In this specific case, although it is not possible to render it in English as 'water', whose denotatum in Eegimaa is *m-al*, it is clear from the glosses above that the meaning relates to drinking and liquids, particularly water.

17 After drinking the poisonous substance from this tree, the guilty person in a trial by ordeal was expected to die whereas the innocent was expected to survive.

2.4.1.4 Is there an object-to-action correspondence between nouns and verbo-nominals?

It is worth pointing out that there are some verbo-nominal lexemes, for which an object-to-action correspondence exists. In such instances, the action described by the verb refers to the manipulation of an instrument whose signifier shares the same stem as the object. This phenomenon is restricted to some verbo-nominals, especially those that take the prefix *ja-* and refer to some fishing and hunting activities, as exemplified in (78). These verbo-nominals can be used with verbal morphology, just like verbs. Example (79), however, shows that not all verbo-nominal lexemes taking NCP *ja-* or referring to hunting and fishing describe an action involving the manipulation of an instrument. Not only is the object-to-action correspondence restricted to some instances, but in general, the semantic correspondences between nouns and verbs vary too greatly to lead to the conclusion that flexible stems always have an abstract meaning reflecting an object-to-action correspondents.

(78)

Verbo-nominals with NCP *ja-*		Instrument used	
já-pumben	'hunt with a gun'	é-pumben	'gun'
ja-bbut	'fish with a fishing rod'	ga-bbut	'fishing rod'
ja-mbal	'fish with net'	e-mbal	'fishing net'

(79)

Verbo-nominals with NCP *ja-*		No instrument use
já-kkuj	'wrestle/wrestling'	n/a
ja-raw	'catch small fish/minnows'	n/a
já-kkoben	'hunt/hunting by hiding on tree'	n/a

2.4.2 Flexibility at the level of the lexeme – conversion/zero-derivation?

2.4.2.1 Flexible uncategorised stems and lexemes

Many phonologically identical lexemes in the Eegimaa grammar can have both nominal and verbal functions. These lexical items, which take the same noun class prefixes and have the same stem, are polycategorial lexemes and are, therefore, included in the category of verbo-nominal lexemes.

Examples where two phonologically identical forms belong to two different word classes are *e-ber* 'laugh/laughing/laughter', *e-lob* 'speak/speaking/speech/, where there is formal identity both at the level of the stem and at the level of the word form. In example (80) *e-ber* 'laugh/laughing/laughter' has a verbal function and takes an object. The same form functions as a noun in example (81), where it triggers agreement in gender and number on the verb 'break'. Example (82) shows

the occurrence of the root *-ber* 'laugh/laughing/laughter' in a finite context where the inflected verbal form takes a person prefix and the completive TAM suffix *e-*.

(80) The stem *-ber* 'laugh/laughing/laughter' used in a (non-finite) verbal context

u-hal-ut	me	e-ber	bug-an	an
2SG-stop-NEG	SUBORD	CLe-laugh	CLbug-person(I.PL)	person(I.SG)
pan	á-mus		a-teg-i	
FUT	I.3SG-have.ever		I.3SG-beat-2SG.OBJ	

'If you don't stop laughing at people, someone will beat you up one day.' (Part-obsv-308)

(81) The stem *-ber* 'laugh/laughing/laughter' used in a nominal context

e-ber	e-faç-ol!
CLe-laugh(II.SG)	II.SG-break-3SG.OBJ

'Lit: laughter is breaking him/her!' (Part-obsv-307)

(82) The stem *-ber* 'laugh/laughing/laughter' used in a finite verbal context

aw	ay	nu-ber-e?
you	GI.WHO	REAL.2SG-laugh-CPL

'Who are YOU laughing at?'

In addition to functioning as nouns and verbs, the forms illustrated with *e-ber* 'laugh/laughing/laughter' in the examples above also correspond to mixed categories like the English gerunds, which have properties of both nouns and verbs. These are exemplified in example (83).

(83) The stem *-ber* 'laugh/laughing/laughter' used in a mixed 'ing' context

e-ber	é-ssum-e
CLe-laugh(II.SG)	II.SG-be.good-CPL

'Laughing is good!'

There are two possible analyses for the forms presented in the examples above. First, these forms can be analysed as instances of conversion/zero-derivation, which we look at first, or they can be analysed as flexible/uncategorised forms both at the stem and the word form levels (Luuk 2010). This is the approach favoured here.

In the literature, lexemes that are formally identical but belong to different word classes such as those exemplified in (80) to (82) are generally analysed as products of conversion/zero-derivation, with the implication that there is a deri-

vational process by which one of the words in the pair is derived from the other. Conversion may be defined as "a derivational process linking lexemes of the same form but belonging to different word-classes" (Bauer & Valera 2005: 8). Analyses based on conversion/zero-derivation are controversial in the literature on noun and verb distinctions (Bauer 2008; Bauer & Valera 2005; Rijkhoff & van Lier 2013). If conversion is viewed as a process, then the direction of derivation between the lexemes must be determined. The most common criteria used to determine directionality include historical evidence where the etymology of words is used to ascertain the source of the derivation. Historical evidence as a way of determining directionality in conversion looks at the order of appearance in historical records. The first word to appear is assumed to be the source of the derivation whereas the last one to be recorded would be the derived word. The other historically based way of determining directionality in conversion is by looking at the etymological evidence from historical dictionaries which provide information on which word is derived from the other. The date may not be given in this case.

Historical evidence is impossible to apply in Eegimaa due to the lack of historical linguistic records. Even in languages with a strong historical record, diachronic evidence is not always reliable as a criterion to ascertain the source of derivation (Tribout 2010; Balteiro 2007). Since historical evidence cannot be used to help determine the direction of derivation in conversion, authors like Marchand (1964; 1967) propose synchronic evidence where semantics provides the most important criteria to determine directionality. Three of Marchand's semantic criteria which I discuss[18] here include *semantic dependence*, *restriction of usage* and *semantic range*.

Semantic dependence is the main criterion to establish directionality according to Marchand. Given a pair of words, the one that is semantically more independent should be considered the base for the derivation. For example, *knife* (v) 'wound with a knife' is semantically dependent on the use of a *knife* (n). This is, however, not the case with *whistle* (v) where "the analysis of the verb does not call for any semantic features of whistle" (Marchand 1964: 245). In other words, the action of whistling does not depend on the instrument (whistle). In the latter case therefore, the direction of the base word for the derivation is the verb.

In Eegimaa, some of the clearest instances of instrument-to-action with that instrument, are the words *ga-bbut* 'fishing rod' and *ja-bbut* 'fish/fishing with a fishing rod'. In these instances, there is phonological identity at the stem level,

18 Marchand proposes other criteria such as morphological ones to ascertain the direction of conversion. Since these are said to be less important than semantic criteria, and given the preference for a flexibility analysis over conversion/zero derivation, I will not test all the criteria he proposes. I leave this for future research.

but not at the level of the word form. In cases where there is full phonological identity at both levels, as with *e-ber* 'laugh/laughing/laughter' and *e-lob* 'speak/speaking/speech/word', one might argue that laughing and speaking must precede the production of laughter and speech. However, it is difficult to apply the criterion of semantic dependence to all flexible words. For example, it is unclear which meaning can be taken as the source of conversion/zero derivation in *e-mmoç* 'to be dark/darkness'.

According to the semantic criterion of restriction of usage, in a word-pair, the word with more general usage should be considered the base, whereas the one that has more restrictions on its usage is the derivative. An English example is *hunger* (n) which is the base for the derivation of *hunger* (v) because the former has a wider range of usages, whereas the latter is restricted to some literary styles. I have not been able to find an example of conversion in Eegimaa where the source of the derivation can be determined using the criterion of restriction of usage. But even if examples were many, this criterion would not fully account for the possible derivations between nouns and verbs in cases of phonological identity that may be considered as instances of conversion.

The final semantic criterion discussed here is Marchand's (1964) semantic range, according to which, the member of a word-pair in a conversion which has a more specialised meaning will be analysed as the derivative whereas the one with larger semantic range would be seen as the base of the conversion. The criterion can be illustrated with *butcher* (n) and *butcher* (v) where the noun has a larger range of meaning than the verb whose semantic range is said to be smaller. Here again, it is difficult to use this criterion to account for the polycategoriality of words having the same phonological form in Eegimaa.

Overall, the semantic argument is difficult to apply to account for directionality in the noun-verb distinction in the synchronic Eegimaa data analysed here. It is nearly impossible to determine when a given convert may have been recorded first in the language due to the lack of historical records, as pointed out earlier. Semantic criteria may help to determine the primacy of an action-denoting word over an entity-denoting one or vice versa, but overall, it does not easily apply to all cases. The position taken in this book is that, in addition to distinguishing nouns and verbs, Eegimaa has a class of flexible, category-neutral stems and word-forms.

In the case of Eegimaa, phonologically identical stems and word pairs belonging to different word class categories, such as those exemplified in (80) and (81), are therefore analysed as flexible, cross-categorial forms. The stems in these words are also analysed here as flexible or uncategorised forms from which nominal and verbo-nominal lexemes such as those discussed in 2.4.1 are formed.

2.5 Summary of the noun-verb distinctions

To summarise this chapter, Eegimaa has a monocategorial class of nouns as well as a monocategorial class of verbs. It also has a category of words which has been labelled verbo-nominal in the literature on African linguistics and correspond to flexible words reported in the typological literature. In this chapter, I argued that Eegimaa has a noun/verb/flexible type of parts-of-speech system. Verbal lexemes are more specialised in verbal uses and have restricted nominal characteristics compared to those of verbo-nominals. These monocategorial verbs predominantly take NCP *e-*. Verbo-nominals have dual category membership, exhibiting properties of monocategorial nouns and verbs. However, there is no general rule by which their categorisation into morphological classes can be predicted. In their non-finite verbal form, flexible words/verbo-nominals and monocategorial verbs attach to several different noun class prefixes (See Chapter IV), resulting in the overt classification of verbs and the semantic categorisation of events. This is the main phenomenon investigated in the rest of this book.

3 The Eegimaa noun class/gender system

3.1 Introduction

In this chapter, I analyse the Eegimaa noun class systems using a new approach whereby morphological classes and agreement classes are considered separately. Traditional analyses of African noun class systems have been dominated by an approach that is strongly biased "towards the reconstruction of Bantu and wider Benue-Congo" languages (Güldemann & Fiedler 2019: 95). In this traditional approach, singular and plural forms of the same nominal lexemes are analysed as members of different classes. This traditional approach has been criticised for different reasons, including the following. First, nouns show complex singular-plural correspondences in their morphology. Second, the forms of the noun class markers on nouns do not necessarily match agreement targets, the criterion traditionally used to assign noun to classes. Third, the traditional approach to analysing Niger-Congo noun class systems does not facilitate typological comparison with other grammatical gender systems. These issues have led scholars to propose different ways of analysing these systems (Pozdniakov 2010; Güldemann & Fiedler 2019). In this chapter, I propose an approach in which nominal morphological classes are analysed separately from agreement classes as defined in Corbett (1991). This approach was used in early studies on Bantu noun class systems by authors like Wilhelm Heinrich Bleek, as discussed in Doneux (2003: 36). I will argue that this is the best approach to account for the complex singular-plural correspondences with nouns, and the ideal method to account for lexical hybrids and the semantic agreement mismatches they trigger on their targets (Sagna 2019b). This approach also helps to better capture the interaction of gender and number features and their values.

This chapter is structured as follows. Section 3.2 provides some further background on the analysis of Niger-Congo noun classes. In Section 3.3 I discuss terminological issues that arise in the study of noun class systems, and I distinguish contexts in which the terms "noun class" and "gender" are used synonymously from contexts in which "gender" is used synonymously with "agreement class". In Section 3.4, I examine the canonical properties of African noun class systems and discuss the traditional approach to identifying classes in these languages. In Section 3.5, I provide a detailed examination of the nominal morphological classes found in Eegimaa, based on what Schadeberg (2001) calls the gender-plus-number approach. The argument proposed by some authors in the Africanist literature that number is derivational is also addressed in this section. I also

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propose an analysis of the Eegimaa agreement classes/genders, including an examination of lexical hybrids. The discussion of this chapter is summarised in Section 3.6.

3.2 Background: Analysis of African noun class systems

Those who study African noun class systems come across accounts that state that African noun class systems and sex-based gender systems belong to the same type of nominal classification system, because they are fundamentally defined by the presence of agreement. However, such scholars are soon confronted with the reality that these two related types of agreement-based nominal classification systems are analysed differently following two established competing analytical approaches. The dominant approach in African linguistics may be termed the *class-plus-pairings* approach, (following Schaderberg, 2001), where the primary unit of analysis is the word form. In this approach the singular and plural forms of a lexeme are assigned to separate *classes* based on the different agreement patterns they exhibit. Thus, sets of nouns that trigger the same agreement patterns in the singular constitute a class, while their plural counterparts will form a different class. The second approach is the one termed the *gender-plus-number* approach (Schadeberg 2001), which is favoured for the analysis of sex-based gender systems such as those found in Indo-European languages – and in the general linguistics literature. Here, the lexeme is the primary unit of analysis and morphology and syntax are treated as different levels of analysis (Corbett 1991; Aronoff 1994). Nouns are analysed as paradigms and sets of nouns that control the same agreement in their singular and plural forms are analysed as members of the same *gender*. These two approaches are examined here, along with a third, which can be seen as a mixed approach, in that nouns are analysed into paradigms (Pozdniakov 2010), but the analysis of the agreement systems is fundamentally the same as hat used in the traditional Niger-Congo literature (Cobbinah 2013; Watson 2015).

Another challenge that scholars of African noun class systems will face is the fact that the grammatical categories of gender and number are simultaneously marked by the same portmanteau affixes, which therefore cannot be separated. A point of controversy arises from this. Should number be treated as inflectional, as is commonly accepted in the general linguistics literature, or as derivational, as proposed by some in the Africanist literature (Mufwene 1980; Mufwene 1981; Schadeberg 2001; Cobbinah & Lüpke 2014)?

In my previous research (Sagna 2008; Sagna 2012), I used the *class-plus-pairing* approach to analyse the Eegimaa noun class system, separating singular

and plural forms of nouns into different classes as is in the traditional approach. In this book, however, I use the lexeme-based *gender-plus-number* approach and separate morphological inflectional classes from agreement classes or genders as defined in Corbett (1991). I argue that, from the point of view of theoretical linguistics, this approach best shows how the grammatical features of gender and number and their values interact in the noun class and agreement system.

3.3 Definition of terms

In Niger-Congo noun class systems, nouns are grouped into a finite number of classes. All nouns are included in this classification, which is primarily a classification of nouns, not referents (Dixon 1968). In the description of agreement-based systems of nominal classification, the terms "noun class" and "gender" are used in distinct ways. Sometimes, they are used interchangeably. I review these different uses in this section and justify my own use of these terms in this book.

3.3.1 Interchangeable uses of "noun class" and "gender"

The terms "noun class" and "gender" are used interchangeably in the typological literature, when they serve as cover terms to refer to systems of nominal classification fundamentally based on agreement. In these types of systems, all nouns are assigned to a finite number of categories based on agreement criteria.

"Gender" is most commonly preferred to describe languages characterised by a small number of genders, and where sex distinctions like masculine, feminine and neuter are present. These sex-based gender systems, as they are often called (e.g. Heine 1982; Corbett 2011), are generally of the covert type (Greenberg 1978: 53), that is, the form of the noun does not generally indicate its gender membership. There are, of course, also sex-based gender systems like Qafar, which are predominantly overt, and others like Russian, which are moderately overt (Corbett 1991: 62–63). But in general, sex-based gender systems tend to be more often covert than noun class systems.

The term "noun class" is the best-established term in the descriptive traditions of the kind of agreement-based nominal classification systems found in the Niger-Congo phylum, where the number of classes ranges from more than two to over twenty. Biological sex differentiation is typically irrelevant in these noun class systems. Niger-Congo (non-sex-based) noun class systems are more often overt than sex-based gender systems, since class marking on the noun is typically obligatory in these languages, and the class of the noun is generally

evident from its form. Note, however, that there are languages like Wolof which have lost most of their noun class marking, but these are in the minority.

Despite these preferences, there is a general agreement in the typological literature that the choice of the term "gender" or "noun class" is simply a matter of descriptive tradition, because structurally, systems in which sex differentiations are made grammatically (traditional gender systems) "do not differ in any basic way from [noun class systems] in which sex does not figure" (Greenberg 1978: 241).

It is also worth noting that in the typological literature a language can have masculine and feminine distinctions in its nominal classification system, but still be referred to as a *noun class system*. For example, the term "noun class" is traditionally used to describe agreement-based systems of nominal classification found in the languages of the Caucasus such as Lak and Archi, which make a gender distinction between male and female for rationals (Corbett 1991; van den Berg 2005). Other examples are Australian noun class systems like Dyirbal (Dixon 1972), which include biological gender differentiations for humans.

The use of either "gender" or "noun class" as a cover term can also be a matter of personal choice on the part of authors with different motivations. The term "gender" is used in typological works such as Hockett (1958: 231–233), Greenberg (1978: 241) and Corbett (1991: 1). The justification for using "gender" as a cover term is that it means 'kind', which etymologically derives from Latin *genus*. "Noun class", on the other hand, is used as a cover term by other authors (see e.g. Dixon 1968; Dixon 1986; Aikhenvald 2000; Grinevald 2000; Seifart 2010). A possible justification is found, for example, in de Wolf (1971), who argues that a noun class system is a more complicated kind of gender system.

To place Eegimaa in the context of the language family to which it belongs I will continue to refer to its system of nominal classification as a *noun class system*, following the Africanist tradition. This choice also has the advantage of avoiding the common unwanted association between gender and sex distinctions.

3.3.2 When "noun class" and "gender" are not synonymous

The terms "noun class" and "gender" are not synonymous when they refer to the sets into which nouns are grouped in a noun class system. In the traditional and standard analysis of Niger-Congo noun class systems, sets of nouns that trigger the same agreement markers on their targets are treated as singular or plural

classes. This is exemplified in (1) and (2) with data from Eegimaa, where the singular and plural forms of the noun for 'lip' are assigned to different classes.[19]

(1) The singular noun 'lip' belongs to traditional class 7

fi-bbeñ-ol	fu-llala
CL7-lip-3SG.POSS(IV.SG)	CL7-swell.REDUP(IV.SG)

'His/her lip is swollen.' (ss2006_Part-Obsv)

(2) The plural noun 'lips' belongs to traditional class 8

gu-bbeñ-ol	gu-llala
CL8-lip-3SG.POSS(IV.PL)	CL8-swell.REDUP(IV.PL)

'His/her lips are swollen.'

As Welmers (1973: 162) puts it, in the traditional approach exemplified above, "it is the combination of noun prefixes and concordial morphemes that is significant". Therefore, a singular and a plural form of the same lexeme are treated as members of different classes because of the different agreement patterns they trigger. When singulars and plurals are treated as a pair, the resulting unit is called a "gender". So, the class pair 7/8 would be labelled Gender 7/8. An alternative notation is to use Roman numerals to label the genders as I do in this book. In that case, Gender 7/8 is conventionally labelled Gender IV, followed by the number marking. As can be seen in the glosses in examples (1) and (2). A gender may therefore be seen as a combination of what is traditionally called singular and plural noun classes. This is a context where the terms "gender" and "noun class" are not used interchangeably.

The analysis in pairings or genders would better account for Niger-Congo noun class systems if the class marking on the nominal morphology and the agreement morphology always fully matched. But most Africanists reject this approach because languages where there is a one-to-one match between class marking on the noun and agreement marking on targets are rare. Welmers (1973: 162) argues that "the only merit in pairing the forms is semantic and statistical, or pedagogical." Creissels (2001: 179) points out that this approach introduces unnecessary

19 For demonstration purposes, here and in Section 3.4 the noun class markers on nouns and the agreement markers are glossed using Arabic numerals, as in the traditional notation conventions. Genders (pairs of agreement patterns) are labelled with Roman numerals (between brackets). In the rest of the book, in conformity with a growing tradition in the description of Atlantic noun class systems and with the idea that morphological classes should be separated from agreement classes, morphological classes are labelled using the phonological shape of the prefix whereas agreement classes/genders are glossed using Roman numerals.

complications in the way the systems are presented because the singular and plural correspondences exhibit a high degree of irregularities and instability. An example of such irregularities is illustrated in (3) with Eegimaa data, where the nominal class marker and the agreement do not match. In this example, the controller noun takes a prefix from the traditional class 11, but it controls consistent agreement in traditional class 3 (Gender II).

(3) Mismatch between nominal class marking and agreement

ji-ggaj	yayu	mat’	e-çet
CL11-panther(II.SG)	CL3.DEF(II.SG)	FUT.NEG	CL3-die(II.SG)

‘The panther will not die.’ (ss20130930_Buggaj)

One of the main issues facing the traditional approach is the inconsistent use of the term “class” (Corbett 1991; Schadeberg 2001), which in some cases is used to describe the morphological classification of nouns by nominal class markers, but in other cases, to refer to the class to which the noun is assigned based on agreement criteria.

In this book I adopt the gender-plus-number approach, which requires a separate treatment of the nominal morphological and syntactic levels. I show that the irregularities reported for other Niger-Congo noun class systems are also found in the Eegimaa noun class system, but I argue that these irregularities, which are used to reject the lexeme-based approach to noun class analysis, can be accounted for by separating nominal morphological classes from agreement classes or genders, as proposed in Corbett (1991).

In the analysis of the Eegimaa noun class system proposed in this book I distinguish *nominal morphological classes* or *inflection classes,* i.e. the “set of lexemes whose members each select the same set of inflectional realisations” (Aronoff 1994), from genders/agreement classes. A *gender* or *agreement class* is defined following Corbett (1991: 147; 2007: 243) as a set of nouns which, whenever “they stand in the same morphosyntactic form” (e.g. singular) and “occur in the same agreement domain” (e.g. the noun phrase) and “have the same lexical item as agreement target” (e.g. adjective), have the same morphological realisation on their targets. Thus, “gender” is used interchangeably with “agreement class” only to refer to a pair of singular and plural agreement patterns viewed as a unit, and without taking the nominal morphology into account. Note that this use of agreement class is different from Güldemann & Fiedler (2019), where an alternative analysis to the traditional African noun class systems was proposed. In this work, agreement classes refer to the agreement patterns triggered by singular or plural nouns. However, their definition of gender is the same as the one used here following Corbett (1991).

For the analysis of the semantics of the Eegimaa noun class system presented in Chapter V it is important to look at the prefixes individually, as I do in Sagna (2008). This is based on the argument that prefixes are associated with semantic content. So, I will use the term *nominal morphological class* or *M-class* to refer to a set of nouns which take the same singular and plural noun class prefix (see section 3.4.2 for further details on this choice).

3.3.3 Agreement domains, controllers, targets and features

Agreement is expressed in different syntactic environments or *domains*. These domains include the noun phrase, the clause, the sentence and structures beyond the sentence (Corbett 2006). I use the term *controller,* following Corbett (1991; 2006) to refer to nouns, which control agreement within the NP, and noun phrases, which function as agreement controllers beyond the noun phrase. Elements that show agreement are called agreement *targets*. In Eegimaa, targets include different kinds of determiners, adjectives, numerals (cardinals up to four and ordinals up to five), quantifiers, verbs and different kinds of pronouns. Targets show agreement of different grammatical categories or *features* such as gender, number and person as well as their values, which are often also referred to as *feature values*. For example, the values of the feature number include singular and plural.

The terms discussed above are important for a good understanding of the discussion of the canonical Niger-Congo noun class systems presented in the next section, and also to follow the discussion in the rest of the chapter.

3.4 Approaches to the study of noun class systems

3.4.1 Canonical noun class systems and the traditional approach

This section examines two different approaches used to identify individual classes in African noun class systems (Pozdniakov 2010: 93). Here I focus first on the traditional approach, and then examine what has been termed the "paradigm approach". In Section 3.5, I provide an inventory of the Eegimaa nominal morphological classes and genders using the gender-plus-number approach, as proposed in Corbett (1991).

In order to place Eegimaa in the general context of the Niger-Congo noun class systems, let's first examine the properties of what would be a canonical or ideally simple Niger-Congo system. The canonical criteria for noun class systems

I propose here are adapted from Creissels (2001: 161).[20] According to these criteria, which are further discussed below, an ideally simple and thus canonical African noun class system would be one where:

c1. All controller nouns take an overt noun class marker.
c2. The affix on the controller noun is formally identical to the one on every noun that triggers the same agreement patterns, i.e. on all nouns that belong to the same class in the traditional sense.
c3. Class marking is unambiguous.
c4. Class markers are phonologically uniform.
c5. Plurals are formed on a one-to-one basis without syncretism.

As Creissels (2001) points out, no Niger-Congo noun class system exhibits such an "ideally simple" system. But we can use this as a reference point to gauge the variations in Niger-Congo noun class systems.

It is important to bear in mind that I refer to this ideal system as a canon rather than a prototype, as Creissels does. This is because these two notions are not necessarily synonymous, and it seems the ideal noun class system discussed above fits the term canon better than prototype. The distinctions I use here between prototype and a canon are from Corbett (2010: 141–142).

The term canon can be synonymous to prototype in the sense that both refer to the best, clearest and least disputable example of a phenomenon. However, their differences can be ascertained using the following points. First, a prototype has a psychological reality in the sense that it has an exemplar, which is part of a language speakers' tacit knowledge, whereas a canon has no exemplar and no psychological reality. Second, while prototypes show cultural variation, a canon is an invariant theoretical construct. For example, if the prototype of a bird is a robin in English, it is bound to be another bird for speakers of a language who live in an environment where robins do not exist. To illustrate the invariability of a canon, Corbett gives Daniel Jones' cardinal vowel system diagram as an example, arguing that "it serves as an anchoring point for the vowel space, irrespective of whether we find such an extreme vowel in a given language" (Corbett 2010: 142). Finally, because a canon expresses an ideal situation it is expected to be rare and often non-existent. A prototype, on the other hand, must be occurrent to be the most central member of a category.

20 Criteria 1 to 4 are adapted from Creissels (2001: 161). But Criterion 5 is my own addition, as is the general formulation of the criteria.

Since there is no known language that exhibits all the properties of the ideal Niger-Congo noun class system presented above, I prefer to speak of a canonical noun class system. Note that the view of canon taken here is a gradient, not a categorical one, since a canon serves as a reference point to gauge the data instances we observe in the data. Consequently, some instances will be described as more or less canonical than others.

We can now situate existing noun class systems like Eegimaa in relation to the canon presented above, starting with Criterion 1.

c1 Nominal class marking > no nominal class marking

The idea of C1 is that it is more canonical for nouns in a noun class system to take an overt noun class marker than not to have one. In Eegimaa most nouns have a noun class prefix. But there are also nouns like ***púddum*** 'viper', exemplified in (4), which do not have a noun class prefix. This means that Eegimaa does not exhibit the full set of nominal marking characteristics for all nouns that is associated with the most canonical noun class system.

(4) A prefixless noun from traditional Class 3
Øpúddum uyu!
[CL3]viper(II.SG) COP.CL3.MED
'There is a viper there!'

c2 Formal identity of markers of nouns of the same class > no formal identity of markers of nouns of the same class

C2 stipulates that in an ideal noun class system, all nouns from the same traditional class should have identical prefixes. In the traditional analysis, the nouns in examples (4) to (6) would be said to belong to the same class because they control the same agreement patterns on different targets, as illustrated with the demonstrative. But as can be seen from these examples, nouns that control the same agreement patterns may not take the same nominal prefix. For example, while the noun in (4) does not have a prefix, the one in example (5) takes NCP *e-*, while the prefix of the noun in (6) is *y-*.

(5) A noun from traditional Class 3 taking NCP *e-*
e-joba uyu!
CL3-dog(II.SG) COP.CL3.MED
'There is a dog there!'

(6) A noun from traditional Class 3 taking NCP *y-*

y-on	uyu!
CL3-crocodile(II.SG)	COP.CL3.MED

'There is a crocodile just there!'

The use of either *e-* or *y-* as a nominal class prefix for what is traditionally labelled class 3 in Eegimaa is lexically determined, i.e. most nouns of class 3 take the prefix *e-* whereas a few take *y-* as a noun class marker. However, there is no synchronic rule motivating the alternation of these prefixes on nouns. On agreement targets, however, *e-* and *y-* alternate, with the former appearing before consonants, whereas the latter is found in pre-vocalic context (see example (7)). It is possible that, historically, the prefixes *e-* and *y-* showed phonologically-motivated alternations on nouns similar to those found with agreement markers, at least for some nouns. But there is no synchronic evidence for this. The examples in (4) and (6) show one of three types of variations between noun class prefixes found on nouns from the same traditional class. Recall here that the membership of a class is traditionally decided on the basis of agreement and not nominal morphology.

There is another type of variation between nominal prefixes that attach to nouns that are traditionally analysed as members of the same class. This is first exemplified in (7) where the prefix *ji-* from the traditional class 11 attaches to the noun 'panther', which triggers agreement from class 3 (*y-* and *e-*) on the definite article and the verb. Here, there is a clear formal mismatch between the morphological marking and the agreement marking.

(7) Mismatch between nominal class marking and agreement

ji-ggaj	yayu	é-lapu-laput
CL11-panther(II.SG)	CL3.DEF(II.SG)	CL3-be.cruel-REDUP(II.SG)

'The panther is cruel.'

Mismatches between nominal morphological marking and agreement morphology are also found with hybrid nouns as exemplified in example (8), where the prefix on the noun is related to the agreement marker on the definite article, which shows agreement in class 5, but not the subject marker on the verb, whose agreement marker is from the traditional Class 1. For a discussion of lexical hybrids and agreement mismatches, see Section 3.5.3.13.

(8) Mismatch between nominal and part of the agreement morphology

bá-jur	babu	n-á-lapu-laput
CL5b-young.woman(III.SG/I.SG)	CL5.DEF(III.SG)	REAL-CL1-be.cruel-REDUP(I.SG)

'The young woman is cruel.'

Examples (7) and (8) clearly show that nominal morphology and agreement morphology need not match.

Corbett (1991: 45) remarks that the use of the term "class" in the traditional approach leads to confusion, as when a noun is said to belong to a class, it is not clear whether it is the morphology on the noun or the agreement that is meant. Thus, a question facing the traditional class is what classes nouns like *ji-ggaj* 'panther' and *bá-jur* 'young woman' in (7) and (8) belong to. In Sagna (2012) I argued that examples like these show multiple morphosyntactic classification, reflecting multiple semantic categorisation. In this book I separate morphological classes from agreement classes. But the concept of multiple semantic categorisation remains valid, as will be shown in Chapter v.

The third type of mismatch on nominal prefixes is the variation in form between partially similar noun class markers of the form *C-*, *Ca-* and *Cu-*, whose nouns trigger the same agreement markers on their targets. Nouns that take these prefixes are analysed as members of the same class from the traditional point of view because they trigger the same agreements on their targets, as can be seen in (9) to (11).

(9) A noun class prefix of the *C-* form

b-aŋ	babu	bú-jali-jali
CL5-living.room(III.SG)	CL5-DEF(III.SG)	CL5-be.big-REDUP(III.SG)

'The living room is big.'

(10) A noun class prefix of the *Cu-* form

bu-bah	babu	bú-jali-jali
CL5a-baobab(III.SG)	CL5-DEF(III.SG)	CL5-be.big-REDUP(III.SG)

'The baobab tree is big.'

(11) A noun class prefix of the *Ca-* form

ba-ha	babu	bú-jali-jali
CL5b-forest(III.SG)	CL5-DEF(III.sg)	CL5-be.big-REDUP(III.SG)

'The forest is big.'

Previous authors like Sambou (1979) and others following him have treated prefixes of the *c-* shape as resulting from synchronic vowel deletion from prefixes of the *cu-* shape. This is probably historically correct, but there is no synchronic rule in Eegimaa or the other Jóola languages I know to account for such vowel deletion (see Sagna 2010 for more detailed discussion). Data from different Jóola languages, presented in (12), show the same cognate words with noun class prefixes

with the form *c-* in other Jóola languages. This suggests that such a rule might have been frozen at an earlier stage of the Jóola languages.

(12)

Gloss	Eegimaa	Foñi	Kaasa
'river'	f-al	f-al	h-al
'water'	m-al	m-el	m-al
'fire'	s-ambun	s-ambun	s-ambun
'hair'	g-al	k-al	k-al

Further evidence that prefixes of the shape *c-* are not synchronically derived from the *cu-* prefixes comes from the formation of plurals and diminutives. Plurals of the count nouns in example (12) also take prefixes of the form *c-*, as in *g-al* 'rivers' and *w-al* 'hair'. Diminutives for these nouns are also formed with prefixes of the *c-* shape as in *j-al* 'a little water' and *j-ambun* 'a little bit of fire'. This shows that the prefixes of the form *c-* do not have an underlying *u-* vowel. Consequently, noun class prefixes of the form *c-* were treated in Sagna (2010) as belonging to different subclasses of traditional class 5. Here they are treated as members of different morphological inflectional classes from those that have the form *cu-* and *ca-* (see 3.5.2).

Previous studies on Jóola languages (again following Sambou 1979)) have also argued that noun class prefixes of the form *ca-* have an underlying *c-u-a-* form, composed of an underlying prefix vowel */u/* and the vowel *-a-* which is analysed as a kind of augment called the "post-prefixe". The forms *ca-* are, in this view, the result of the deletion of */u/*. In Sagna (2008; 2010) I challenge the synchronic validity of such arguments, on the ground that the rules used to make these claims reflect no synchronic phonological process in Jóola languages. The argument that noun class prefixes of the form *ca-* result from synchronic rules of vowel coalescence which delete the vowel */u/* is an interesting diachronic hypothesis, but such rules are not synchronic. As a result, prefixes of the form *ca-* should be distinguished from those of the form *c-* and *cu-* at the level of morphology, since they are not phonologically-based allomorphs.

To summarise the variations that are relevant to C2, there is no synchronic phonological rule that would suggest that the prefixes on the nouns in (9) to (11) are phonological variants. Rather, they are lexically determined allomorphs and must be treated as subclasses of the same class, if the traditional approach is taken (Sagna 2008), simply because they are phonologically partially similar and trigger the same agreement. Here, however, these prefixes are treated as exponents of different nominal morphological classes.

c3 Nominal class marking is unambiguous > nominal class marking is ambiguous

c3 refers to the fact that in canonical instances nouns that take the same prefixes must belong to the same traditional class and trigger the same agreement patterns. However, it is common in Niger-Congo languages (Heine 1982; Creissels 2001). As it is in Eegimaa, for nouns to have identical nominal prefixes, but the agreement patterns they trigger are those of different singular or plural classes. Compare the nominal prefix and the agreement markers in examples (3), repeated in (13), to those in (14). As the examples show, the nominal prefixes are identical but the agreement markers on targets are different. In the traditional analysis, these two nouns are analysed as members of different classes because agreement takes precedence over nominal morphological marking. From this perspective, we have two nouns from different classes with homonymous nominal prefixes. In the approach used in this book, nouns that have identical prefixes in the singular, say, will be treated as members of the same nominal morphological classes if their plural markers are also identical. In this particular case, however, these two nouns will be analysed as members of different nominal morphological classes, namely *ju-/su-* for *ji-ggaj* 'panther' and *ju-/mu-* for *ji-ttaja* 'firefinch'. because their plural markers *si-ggaj* 'panthers' and *mu-ttaja* 'firefinches' are different.

(13) Identity between morphological marking but difference in agreement

ji-ggaj	yayu	mat'	e-çet
CL11-panther(II.SG)	CL3.DEF(II.SG)	FUT.NEG	CL3-die(II.SG)

'The panther will not die.' (ss20130930_Buggaj)

(14)

ji-ttaja	jaju	mati	ji-çet
CL11-panther(VI.SG)	CL11.DEF(VI.SG)	FUT.NEG	CL11-die(VI.SG)

'The firefinch will not die.'

c4 Class markers are phonologically uniform > Class markers are not phonologically uniform

c4 states that it is more canonical for markers from the same agreement patterns to be identical. But this situation is extremely rare. Some nouns might have prefixes which are identical to some agreement markers on some targets, but because the shape of the agreement markers changes depending on the targets, it is virtually impossible to find instances of full identity between nominal class markers and agreement markers on all targets. Examples (15) and (16) illustrate full and partial identity between noun class markers and agreement targets. In

example (15) the double agreement marker on the definite determiner is partially identical with the noun class marker on the controller noun, but there is full identity between the noun class prefix and the subject marker on the verb. In (16) the nominal prefix is a phonologically-conditioned allomorph of the class prefix *bu-*, as exemplified in (15). It also shows partial similarity with the agreement markers on the definite article and the verbal prefix, because the initial consonant is the same.

(15) Full identity between a nominal prefix and a verbal agreement marker

bu-nunuh	babu	bu-lo-lo
CL5a-tree(III.SG)	CL5-def(III.SG)	CL5-fall-REDUP(III.SG)

'The tree has fallen.'

(16) Partial identity between a nominal prefix and a verbal agreement marker

bi-bej	babu	bu-lo-lo
CL5a-mangrove.tree(III.SG)	CL5-DEF(III.SG)	CL5-fall-REDUP(III.SG)

'The mangrove tree has fallen.'

c5 One-to-one singular and plural correspondence > many-to-one singular and plural correspondence

C5 means that in canonical instances, each set of traditional singular noun classes should have one and only one plural class counterpart. However, this ideal situation is rare in Niger-Congo languages and it is not found in Eegimaa, as there are many traditional singular classes which have the same plural correspondent, thus showing syncretism. For example, the Eegimaa traditional classes 5, 9, and 12 form their plural using class 6 and also show syncretism in agreement marking as exemplified in (17) to (19).

(17) A plural noun from traditional class 5 (cf. example (15)) using class 6

u-nunuh	wawu	u-lo-lo
CL6-tree(III/V/VII.PL)	CL6.DEF(III/V/VII.PL)	CL6-fall-REDUP(III/V/VII.PL)

'The trees have fallen.'

(18) A singular noun from traditional class 9

ga-ssin	gagu	gu-tos-ut
CL9-horn(V.SG)	CL9.DEF(V.SG)	CL9-move-NEG(V.SG)

'The horn that s/he saw has not moved.'

(19) A plural noun from traditional class 9 using class 6

u-ssin	wawu	u-tos-ut
CL6-horn(III/V/VII.PL)	CL6.DEF(III/V/VII.PL)	CL6-move-NEG(III/V/VII.PL)

'The horns that s/he saw have not moved.'

To summarise this section, most Eegimaa nouns take a noun class prefix, but a few do not. The latter are assigned to traditional noun classes based on the agreement they trigger. In this book, however, the nominal morphological class of a noun is analysed separately from its agreement class. Agreement is thus not used to determine the nominal morphological class of a noun. Another characteristic of the Eegimaa noun class system is that NCPs that attach to nouns from the same traditional class are not always identical. The variation in the shape of the NCP may be lexically determined, as with the nominal prefixes *e-* and *y-*, or the prefixes may be partially identical, taking the forms *c-*, *ca-* and *cu-*. Again, in the traditional analysis these prefixes are treated as subclass markers because they are morphologically different, but they trigger the same agreement markers on their targets. In the analysis I propose here, these different prefixes will be treated as members of different nominal morphological classes from the same gender (see Section 3.5.2). The discussion above also showed that there are nouns that take the same prefix but different agreement markers (see examples (13) and (14)). Such nouns, as pointed out above, are analysed in the traditional analysis as members of different classes. A further property of Eegimaa that shows variation from the canonical noun class system is that noun class prefixes and agreement markers are not generally identical (see C 4). Finally, the discussion above showed that plural formation is often done through syncretism instead of a one-to-one correspondence between singular and plural forms. From the traditional noun class perspective discussed in this section, Eegimaa has 15 noun class (discussed in more detail in Sagna, 2008, 2010).

Table 10 presents the main traditional noun classes in Eegimaa, labelled with Arabic numbers. It is a more complete presentation of the complex singular and plural correspondences than the one presented in Sagna (2019b: 595). In this table, regular lines indicate frequent and productive classes, whereas dashed lines are used to show irregular, less frequent and unproductive correspondences between singular and plural nominal morphological classes. The lines show cases of syncretism in the singular and plural correspondences. The discussion in the next section will clarify these correspondences.

Table 10: The main traditional nominal morphological classes in Eegimaa.

SG trad. class			PL trad. class	
a-	1		2	bug-
e-/y-	3		4	su-/si-
bu-/bi-	5		6	u-/w-
fu-/fi-	7		8	gu-
ga-	9			
ju-/ji-	11		10	mu-
ñu-/ñi-	12			
ti-/t-	13			
d-	14			
n-	15			

3.4.2 The "paradigm approach" to analysing noun class systems

Given the complex relationships between singular and plural expressions as well as in agreement marking, recent studies of African noun class systems (e.g. Pozdniakov, 2010)[21] propose that the analysis should be based primarily on the description of individual nominal paradigms, beginning with those that are related and moving to those which are less related. This would be, in this view, a better way of identifying the semantic properties of the noun class system under study. This proposal echoes Corbett (1991) and Aronoff's (1994) argument for analysing nominal morphological classes or inflectional classes by themselves, since morphology should be seen as a level on its own, separate from syntax.

The analyses of the Atlantic languages Baïnounk Gubëeher and Kujireray, in Cobbinah (2013) and Watson (2015), respectively, follow this line of thinking, giving precedence to paradigms, which are seen as the basic units of analysis. A key argument of this approach is that a "noun class system is analysed as operating on three different levels – the level of the paradigm, the level of the noun class, and the level of agreement" (Watson 2015: 227). In this "paradigm approach", the term noun class is used to refer to the component parts of paradigms (Cobbinah 2013: 272; Watson 2015: 229). Note that this use of the term "noun class" sug-

21 Note that Pozdniakov's work focuses only on the morphological level of analysis. Not on agreement.

gests that a noun class operates at the morphological level only. However, using this term even as shorthand, "to refer collectively to the noun class prefix and its associated agreement pattern" (Watson 2015: 228), in cases where the form of the nominal prefix and that of the agreement markers are phonologically related, is problematic. The main problem here is that, as with the traditional approach where the term "noun class" is used inconsistently to refer to the nominal morphological classes and the agreement patterns, the difference between the levels of nominal morphological class and agreement class become blurred. If this term were to be used exclusively to refer to the morphological level, there would be no risk of confusing it with the agreement level.

The main problem with the "paradigm approach" which distinguishes it from the approach used in this book is the treatment of agreement. While the analysis in terms of paradigms mirrors Corbett's (1991) suggestion that nominal morphological classes should be distinguished from agreement classes, the analysis of agreement in the "paradigm approach" follows the traditional class-plus-pairing analysis. That is, singular agreement patterns are separated from plural agreement patterns using alliteration as the main criterion to identify those patterns. By contrast, the analysis proposed in this book treats singular and plural pairs as units called agreement classes or genders. Table 11 illustrates the differences between the approach used here and the one proposed in the "paradigm approach". Two nouns are shown in their singular and plural forms and their corresponding agreement markers on selected targets are highlighted in boldface. In both approaches the nouns 'panther' and 'goat' will be analysed as members of morphological inflectional classes/paradigms *ju-*/*su-* and *e-*/su-[22] respectively. As far as agreement is concerned, the "paradigm approach" would analyse these nouns as corresponding to two agreement classes, namely the singular pattern and the plural pattern. In the approach I propose here (see Section 3.5), these two nouns will be said to belong to one agreement class or gender (see definition in Section 3.3) because they show the same agreements (in gender and number) in the singular and the plural on all targets and in all domains.

In short, what is referred to as the "paradigm approach" seems to be an intermediate "approach" between the traditional analysis of Niger-Congo noun class systems and the gender-plus-number approach. At the level of the nominal morphology, it follows Corbett's (1991) and Aronoff's (1994) suggestion to analyse noun morphological paradigms separately from agreement. However, the analysis

22 Recall that the alternations between vowel /*i*/ and /*u*/ on noun class prefixes are phonologically determined.

of agreement in the "paradigm approach" reverts back to the traditional analysis by separating singular agreement patterns from their plural counterparts in different agreement classes. From a theoretical point of view, this way of analysing agreement does not help to elucidate the expression of grammatical features such as gender and number and the interactions between their values. Likewise, it does not facilitate a typological comparison that aims at finding how agreement systems can work in any language.

Table 11: Paradigm approach vs gender-plus-number analysis.

Nouns	Gloss	Def	Adj	Verb
ji-ggaj	'panther'	y-. . .y-	e-	e-
si-ggaj	'panthers'	s-. . .s-	su-	su-
e-jjamen	'goat'	y-. . .y-	e-	e-
si-jjamen	'goats'	s-. . .s-	su-	su-

In the next section, I present an analysis of the Eegimaa noun class system where nominal morphological classes are distinguished from agreement classes/genders.

3.5 The Eegimaa noun class system from the "gender-plus-number" approach

3.5.1 Morphophonological variations in Eegimaa noun class and agreement markers

Most noun class and agreement markers have a CV- shape in Eegimaa, but a few have the shapes V-, C- or CVC-. There are also nouns without a nominal prefix, but their gender affiliation is evident from the agreement they trigger on their targets.

There are different kinds of morphophonemic variation on the noun markers and the agreement markers. This includes phonologically motivated variation and phonological variation that is not synchronically motivated. Phonologically motivated variation that is synchronic included alternations in [ATR] vowel harmony. Eegimaa has a 10-vowel system, which consists of two sets of 5 vowels each, varying with respect to the feature [+/-ATR]. By rule, a word is either [+ATR] or [-ATR], depending on the nature of the root or the suffix. The [ATR] vowel harmony system is predominantly regressive in Eegimaa. [+ATR] roots and suffixes are the main sources of harmonisation, which turns [-ATR] into [+ATR] vowels in a word.

In terms of nominal class or gender marking, change in vowel harmony never indicates a change in noun class or gender.[23]

The second kind of synchronically based vowel harmony is backness harmony. Bassène (2007; see also Sagna 2008; Bassene 2012) provided the first description for Eegimaa of this phenomenon, which targets high vowels. It is characterised by alternations between the prefix vowels /*i*/ and /*u*/ on nominal class markers and agreement markers. The vowel /*i*/ occurs in prefixes after labial consonants if the initial stem vowel is a front vowel, as in *bi-eb* 'hunger' and *mi-sis* 'salt'. In all other cases the prefix vowel is /*u*/, as in *bu-ul* 'face' and *fu-ar* 'root'.

With prefixes having an initial coronal consonant, the prefix vowel is front /*i*/ if the stem-initial vowel is front /*i*/ or /*e*/ or back /*a*/ (e.g. *sí-bbibi* 'shards', *ji-rem* 'small spring', *ji-ar* 'small root'. The prefix vowel /*u*/ appears in all other cases (e.g. *ñu-vvul* 'Borassus palm tree', *ju-ol* 'small fish'). It should be borne in mind that this kind of vowel harmony is not attested after the velar consonant /*g*/. Crucially, it is important to remember that change in prefix vowel in noun class prefixes does not imply a change in nominal class or gender.

The third type of synchronically based morphophonemic alternation between nominal class markers and agreement markers is the alternation between *u-* and the semi-vowel *w-* and *e-* and the semi-vowel *y-*. As also pointed out in Section 3.4 (see discussion on canonical Criterion 2), on agreement targets, vowels appear before stems having an initial consonant, semi-vowels before vowels. On nominal stems, however, this alternation is lexically determined and does not depend on the stem-initial vowels or consonants. It is not difficult to find nouns like *e-ut* 'star', where a prefix vowel precedes a stem-initial vowel, but in these cases these vowels always belong to different syllables. The important point to remember is that the alternations between vowels and semi-vowels may indicate a change in inflectional class, but not a change in gender.

There are two more instances where nominal class markers and agreement markers show variation that is not phonologically motivated synchronically, as shown in detail in the discussion of canonical Criterion 2 in Section 3.4. The first instance is illustrated with nouns like *m-al* 'water' and *f-al* 'river', where the nominal markers have no vowel and there is no synchronic evidence of vowel coalescence (see Sagna 2010 for detailed discussion). In the second instance, nominal prefixes have a CV- shape, like *cu-*/*ci-* in *bu-mangu* 'mango tree' and *bi-sih* 'poison' or *ca-* as in *ba-giŋ* 'chest'. Here again there is no synchronic evidence to argue that the prefix variation between the vowels /*u*/ and /*i*/ versus

23 In the Eegimaa orthography, [+ATR] is distinguished from [-ATR] by an acute accent on the initial vowel of a [+ATR] word.

/*a*/ is phonologically motivated. In the analysis proposed here, prefixes of the form *cu-*/*ci-* or *ca-* are treated as members of different nominal morphological classes. Nominal *ca-* prefixes combine with nouns which tend to constitute semantic subclasses different from those which take the nominal *cu-*/*ci-* prefix, and express meanings such as collectives of different kinds, as shown in Chapter V.

3.5.2 Nominal morphological classes in Eegimaa

As pointed out in several places above, nominal morphological classes are treated separately from agreement classes (see Section 3.3 for definition). There are theoretical, cross-linguistic and language-specific motivations for making such distinctions.

The theoretical justification for this choice is evident in the argument that "syntax and morphology are autonomous linguistic levels" in the sense that one "level is not entirely reducible to another level and follows principles of its own, in addition to broader principles that may apply to other levels as well" (Aronoff 1994). One of the main criticisms of the traditional approach is that when the term *class* is used, these two levels are not clearly distinguished (Corbett, 1991: 47).

From a cross-linguistic perspective, a reason for treating inflectional classes separately from agreement classes comes from the fact that in some Niger-Congo languages nouns are morphologically classified but do not trigger agreement. For example, in Gur languages like Lobi (Heine 1982: 190) common nouns take prefixes and suffixes which show synchronic evidence of a defunct nominal classification system of the Niger-Congo type, but there is no agreement (see also Heine & Nurse 2000; Pozdniakov 2010). If agreement is the defining criterion for the identification of a noun class system, then these languages can be classed as languages that have nominal morphological classes but not a grammatical gender/noun class system. Conversely, languages like Wolof have agreement marking on targets but have lost morphological nominal class marking on the vast majority of their nouns (McLaughlin 1997: 2). Such languages can be seen as having genders but not morphological nominal classes.

From a language-specific perspective, this discussion has shown that morphological markers on nouns and agreement markers do not always match one-to-one. This is an additional reason to analyse nominal morphological classes separately from agreement classes or genders.

Table 12 presents the different nominal morphological classes in Eegimaa. The gender/agreement classes are illustrated in the last column using verbal

agreement.[24] The classes are somewhat simplified here since hybrids are not shown, but a more detailed analysis of the agreement system and hybrids is given in Section 3.5.3. The conventional numbering for genders is in brackets in the table, where the main genders are numbered from I to IX. Gender X is not included because it lacks any corresponding nominal morphological classes, as pointed in Section 3.5.3.12. Inquorate genders, that is, those that take singular agreement from one gender and plural agreement from another, are labelled using the two genders they occur in, e.g. Gender VI / IV.

Table 12: Nominal morphological classes in Eegimaa.

SG	PL	Count	Example	Gloss	Genders/Agreement classes
Ø	bug-	1	an/bug-an	'person/-s'	a-/gu- (G I)
Ø	su-	2	payya/si-ppayya	'father/-s'	
a-	gu-	10	a-tti/gu-tti	'brother/-s'	
a-	e-	34	a-labe/e-labe	'priest/-s'	
a-	u-	71	a-ttepa/u-ttepa	'builder/-s'	
Ø	su-	12	púddum/sú-puddum	'viper/-s'	e-/su- (G II)
e-	su-	482	é-be/sí-be	'cow/-s'	
y-	s-	5	y-aŋ/s-aŋ	'house/-s'	
ju-	su-	1	ji-ggaj/si-ggaj	'panther/-s'	
ba-	su-	1	bá-jur/ sú-jur	'young woman'	a-/gu- (G I/G III)
b-	w-	2	b-aŋ/w-aŋ	'living room/-s'	bu-/u- (G III)
bu-	u-	207	bu-tum/u-tum	'mouth/-s'	
ba-	u-	73	ba-giŋ/u-giŋ	'chest/-s'	
f-	g-	2	f-ar/g-ar	'stomach/-s'	fu-/gu- (G IV)
fu-	gu-	297	fu-ar/gu-ar	'root/-s'	
fa-	gu-	1	fa-tama/gu-tama	'navel/-s'	
fa-	ga-	4	fá-gur/gá-gur	'kind of feline/-s'	
ga-	gu-	3	ga-ñen/ gu-ñen	'hand/s'	ga-/gu (G V/IV)
g-	w-	2	g-añ/w-añ	'clothing/clothes'	gu-/u- (G V)
ga-	u-	345	ga-rafa/u-rafa	'bottle/-s'	
ju-	mu-	12	ju-ppu/mu-ppu	'bird/-s'	ju-/mu- (G VI)
n/a	m-	1	m-al	'water'	
n/a	ma-	24	ma-agen	'truth'	
ja-	n/a	1	ja-mmeŋ	'crowd'	
ju-	gu-	1	jí-çil/gú-çil	'eye/s'	ju-/gu- (G VI/IV)

24 Agreement marking on different targets is complex. In this table I focus on verbal agreement for the sake of simplicity. Note that the genders are presented based on the singular feature values. Therefore, plural syncretism, which will be discussed in Section 3.5.3, is not shown.

Table 12 (continued)

SG	PL	Count	Example	Gloss	Genders/Agreement classes
ñu-	u-	5	ñí-it/ú-it	'palm tree/-s'	ñu-/-u (G VII)
ña-	n/a	7	ña-tiñ	'pain'	
ñ-	n/a	1	ñ-ondoŋ	'back of the head'	
ti-	n/a	2	ti-nah	'sun/time'	tu- (G XII)
t-	n/a	1	t-iñ	'precise place'	
d-	n/a	1	d-íñ	'place inside'	di- (G IX)

Table 12 shows that Eegimaa has 31 nominal morphological classes, some of which are not involved in singular-plural pairing. Many of these nominal morphological classes have very few members. Note that some Eegimaa nouns are hybrids in the sense that they trigger agreement from different genders.

An important observation is that the number of genders, as exemplified by the verbal agreement, is by far inferior to the number of nominal morphological classes. Also, one gender can have up to five corresponding nominal morphological classes. In most cases the forms of the nominal morphological classes and those of the agreement classes match fully or partially. For example, all the nominal morphological class markers in agreement class IV *fu-*/*gu-* have the initial consonant /*f*/ or /*g*/, and one of these nominal morphological classes has the forms *fu-*/*gu-*, which are identical to the gender markers on the verb. But it is not always the case that nominal morphological class markers are phonologically related to the agreement markers. For example, the noun *ji-ggaj* 'panther' takes the prefix *ji-* in the singular, which is not phonologically related to its agreement *e-*/*y-* (see example (7)).

In this book I treat sets of lexemes whose members have the same inflectional forms as members of the same inflectional morphological class. In other words, nouns are divided into paradigms based on the prefixes they take. In theoretical morphology the term paradigm is used in different senses, as discussed in Spencer (2013). The sense in which I use the term corresponds to what Spencer refers to as the "form-property paradigm" (Spencer 2013: 8). In this sense the paradigms of count noun lexemes have two members and are realised by their singular and plural grammatical word forms. Examples of paradigms include the lexemes FAR and FAL, which are assigned to the same nominal morphological class because both their singular and plural inflectional forms are realised by the same inflectional marker. In the singular they are realised as *f-ar* 'stomach', *f-al* 'river', in the plural as *g-ar* 'stomachs', *g-al* 'rivers', as can be seen in (20).

(20)	f-ar	'stomach'	g-ar	'stomachs'
	f-al	'river'	g-al	'rivers'
(21)	fu-ar	'root'	gu-ar	'roots'
	fu-al	'kind of brown snake'	gu-al	'kind of brown snakes'

Other examples are the lexemes FUAR and FUAL (cf. (21)), which in the singular are realised as *fu-ar* 'root' and *fu-al* 'kind of brown snake', in the plural as *gu-ar* 'roots' and *gu-al* 'kind of brown snakes'.

When a prefix that functions as a singular in a singular/plural pairing attaches to a non-count noun, the latter is analysed as a singulare tantum. If it is plural with count nouns, the non-count nouns which combine with it are treated as plurale tantum. Singulare and plurale tantum nouns have deficient paradigms lacking cells for singular and plural values, respectively (Spencer 2013: 9). However, they are included in the same morphological inflection classes as nouns that have singular versus plural number value distinctions. For example, the paradigm of the non-count lexeme MUJAH has a single member *mu-jah* 'intelligence' and is analysed as plurale tantum because it takes the plural prefix *mu-*, which is also found in plural nouns like *mu-ttaja* "fire finches". Similarly, the paradigm for a non-count lexeme like FUFFANE has one member; *fu-ffane* 'adulthood', which is classified as a singulare tantum because it takes a singular prefix, also found in singular nouns like *fu-baloŋ* "ball".

3.5.2.1 Beyond inflection: Noun class markers as derivational markers

Noun class prefixes are, as shown above, generally exponents for grammatical gender and number inflectional features, but they also have derivational functions. With count nouns the singular-plural feature values are expressed by prefix alternation on the nominal stem. For example, in *a-labe* 'priest' and *e-labe* 'priests', the prefixes *a-* and *e-* alternate on the nominal stem to form the singular and plural, respectively. Recall that non-count nouns take the same prefixes as count nouns and are either singulare tantum or plurale tantum. Noun class prefix alternation is also the strategy by which evaluative morphology is expressed to form diminutive and augmentative expressions. Among non-count nouns stems, only those that are semantically mass allow alternation with the "diminutive" prefixes to express individuation of mass. The strategies for the formation of diminutives and augmentatives and the classification as inflection or derivation are examined in Chapter V.

The derivational functions of noun class prefixes has been the topic of research in several studies in Niger-Congo noun class systems (see e.g. Homburger

1929; Welmers 1973; Mufwene 1980; Schadeberg 2001; 2003). The argument made in these studies is that where more than two prefixes are found on a noun stem, they do not simply function as exponents of the inflectional feature of number but also express change in meaning, which indicates that noun class prefixes also have derivational functions. Mufwene (1980) examines cases where prefixes have a derivational function in Bantu languages. In Eegimaa, similar derivational strategies of the types exemplified by Mufwene can be observed in the use of the same stems with different noun class prefixes to distinguish between trees, fruits, nuts and mass products (fruit juices or medicinal concoctions) extracted from parts of those trees (See Chapter II & Chapter V).

(22)	bu-/u-nnana	'banana tree/s'	bu-/u-bah	'baobab tree/s'
	fu-/gu-nnana	'banana fruit/s'	fu-/gu-bah	'baobab fruit/s'
	ba-nnana	'collective/mass of banana'	e-bah	'baobab fruits/ powder'

(23)	bú-/ú-kkaju	'cashew tree/s'	bi-/u-el	'parinari macrophylla tree/s'
	fú-/gú-kkaju	'cashew fruit/s, cashew drink'	fi-/gu-el	'parinari macrophylla fruit/s'
	é-/sí-kkaju	'cashew nut/s'	e-/si-el	'parinari macrophylla nut/s'

All the prefixes in examples (22) and (23) have inflectional functions, expressing singular and plural number values. But they also have derivational functions in that they are used to derive new lexemes. For example, the singular/plural prefix pair *bu-*/*u-* when attached to a noun stem can denote a 'tree'. Its singular form *bu-* is used with nouns denoting medicine extracted from trees. For instance, the noun *bu-bah*, which normally refers to a 'baobab tree', can also refer to a medicinal product from a baobab tree. The singular-plural pair *fu-*/*gu-*, when attached to stems that can also denote tree names, denotes the fruits of those trees. In addition to expressing the plural feature value for nouns denoting fruits, the prefix *gu-* is also used to derive nouns denoting drinks (juices or alcohol) made from fruits like *gú-kkaju* 'cashew fruits/cashew juice or alcohol'. The prefix pair *e-*/*su-* is used with the stems that can denote trees to refer to nuts from those trees. The noun *é-*/*sí-kkaju* 'cashew nut/s' is a case in point. It has the same stem as nouns for the 'cashew tree' and 'cashew fruit', but the prefixes are different. Note that in some cases, as with *e-bah* 'baobab powder', the prefix *e-* can be used with nouns denoting a collection of certain types of fruits or the powder taken from the pulp of some fruit. Finally, the prefix *ba-* can be used with some nouns denoting certain types of fruits and trees to denote a collection of plants, their fruits or mass substance derived from those fruits. This is the case with the noun *ba-nnana*

'banana', which, depending on the context, can refer to a collection of banana trees, banana fruits or banana mass (e.g. puree).

In short, in addition to expressing singular and plural number feature value distinctions, variations in noun class prefixes on the same stems also make consistent distinctions, especially between 'tree', 'fruit', 'nut' and 'substance'.

Another type of derivation that can be attributed to the derivational function of noun class prefixes is the formation of deverbal nouns. These nouns are derived from verbs to name arguments (Comrie & Thompson 2007: 334). Deverbal nouns include agentive nouns and instrument nouns (see Sagna 2008: 146–149 for a survey of different types of deverbal nouns). They are formed first by suffixation, followed by the prefixation of the resulting nominal stem. This is exemplified in (24) with two agentive nouns, formed using the agentive suffix *-a* and the singular noun class prefix *a-* for humans.

(24)	a-teb-a	a-lob-a
	CLa-carry-AGT	CLa-speak-AGT
	'carrier'	'speaker'

The argument that suffixation precedes prefixation with deverbal nouns is based on the fact that stems of agentive nominalisations can be used alone, with no prefix, as in *-teb-a*. The resulting prefixless noun of the form *stem + agentive suffix* functions as a praise name describing the doer of the action the verbal stem refers to.

Nominalised forms can also be derived from stative verbs using different noun class prefixes. This is exemplified in (25) and (26). Example (25) illustrates forms derived from the stative verb *é-jal-o* 'be big' (also *é-jali* 'be big'), which are composed of the middle suffix *-o*, the root *-jál* and different noun class prefixes. These forms function as nouns with different semantic content and as non-finite verb forms, as their glosses suggest. The form *é-jalo* 'be big' can only function as a stative verb. However, the derived forms, like *má-jalo* 'big size/be big' exemplified in (25), can have both a verbal and nominal use. These are action/state nominalisations, which are actions and state nouns created from action verbs and stative verbs or adjectives meaning "the fact, the act, the quality, or occurrence of that verb or adjective" (Comrie & Thompson 2007: 335). Eegimaa action/state nominals are mixed categories whose morphosyntactic properties are discussed in Chapters II and IV.

(25)	é-jal-o	'be big'	bá-jal-o	'supernatural power/have supernatural power'
			fú-jal-o	'fatness/be fat'
			má-jal-o	'big size/be big'
(26)	e-hay	'be dry'	ma-hay-e	'dry place/dryness'
	é-ssum	'be good'	má-ssum-e	'sweet place/sweetness'
	e-lof	'be close'	ma-lof-e	'close part/proximity'

Example (26) illustrates abstract nouns describing the inherent quality of some entity. I argue that these nouns are derived by prefixation and then suffixation because stems can occur with the suffixes alone only in impersonal constructions such as *-lof-e* 'it's close', but never in nominal functions. However, only the use of the prefix *ma-* results in the creation of abstract nouns broadly meaning 'that which is x'.

There are also instances of noun-to-noun derivations with no suffixation, and where a noun may be derived from another noun simply by changing the noun class prefix that attaches to it. This is exemplified in (27). Here the change in prefix also reflects semantic distinctions.

(27)	a-ssay	'witch'	mu-ssay	'witchcraft'
	e-ppaŋ	'fishing fence'	bu-ppaŋ	'inside of the fishing fence.'

Another derivational use of noun class markers, similar to what Mufwene (1980) describes for Bantu languages, is the derivational use of different locative prefixes to express precise location, general location and location inside a place. This is exemplified in (28) with the stem *-iñ* 'location' in what is traditionally called the locative classes.

(28)	t-iñ	'precise'
	b-iñ	'general'
	d-iñ	'location inside'

A final example of derivation discussed in Mufwene (1980: 252) is the expression of the diminutive for the individuation of mass. The controversial issue as to whether evaluative morphology – e.g. diminutive and augmentative – should be analysed as inflectional or derivational is addressed in Chapter V.

In summary, we have seen in this section that the relationship between inflection classes and genders is not straightforward. Nominal class markers are not always similar to gender agreement markers on targets. The idea of analysing

nominal morphological or inflection classes by themselves, separate from agreement classes, as is done in this book is not new. It has been argued for in the theoretical morphology and typological literature (Corbett 1991; Aronoff 1994) and also used in the presentation of relationship between inflection classes and gender in some textbooks (e.g. Haspelmath & Sims 2010). In Atlantic languages Pozdniakov (2010) and research on the Baïnounk language Gubëeher (Cobbinah 2013), and the Jóola language Kujireray (Watson 2015) also promote a separate treatment of nominal morphology in what is termed the "paradigm approach". The key difference between that approach and the one proposed here is the treatment of agreement. As pointed out above, in the paradigm approach the treatment of agreement is not based on the distinction between features such as number and gender and their values (see e.g. Corbett 2012). However, these features are fundamental to the analysis of the Eegimaa agreement system presented in the next section.

3.5.3 Agreement, agreement classes and Eegimaa individual genders

The Eegimaa agreement system examined here is analysed from the perspective of canonical typology. The identification of genders in the approach used here is essentially based on the notion of *agreement class* as defined in Section 3.3.2. Following Corbett (2006), a distinction is made between syntactic (more canonical) agreement, where targets are marked with the formal properties of the controller noun, and semantic (less canonical) agreement, where the targets agree with the semantic properties of the controller noun. Also, following Corbett (1991), I treat the grammatical features of gender differently from number. This is based on the argument that a noun typically has one inherent value for the gender feature but can take more than one value for the number feature. As we will see in the analysis of lexical hybrids, a noun can trigger mismatches in gender and number on different targets. Recall that a noun class and a gender do not mean exactly the same thing. Strictly speaking, a gender in the sense used here is equivalent to a paradigm of agreement patterns where only agreement morphology is in focus, but not to a single class in the traditional Niger-Congo sense, i.e. a set of nouns that trigger the same agreement patterns in the singular or the plural.

Table 13 presents the Eegimaa agreement classes using targets like demonstrative pronouns, independent pronouns, adjectives and the verbal predicate as illustrations. Inquorate genders, that is, the genders which take the singular of one gender and the plural of another one, are shaded in the table.

Table 13: The main agreement classes of the Eegimaa noun class/gender system.

Gender	SG				PL			
	DEM	**PRO**	**ADJ**	**VP**	**DEM**	**PRO**	**ADJ**	**VP**
I	m-	m-	a-	(n)a-	bug-	bug-	gu-	gu-
II	y-	y-	e-	e-	s-	s-	su-/si-	su-/si-
III	b-	b-	bu-/bi-	bu-/bi-	w-	w-	u-	u-
IV	f-	f-	fu-/fi-	fu-/fi-	g-	g-	gu-	gu-
V/IV	g-	g-	gu-	gu-	g-	g-	gu-	gu-
V	g-	g-	gu-	gu-	w-	w-	u-	u-
VI	j-	j-	ju-/ji-	ju-/ji-	m-	m-	mu-	mu-
VI/IV	j-	j-	ju-/ji-	ju-/ji-	g-	g-	gu-	gu-
VII	ñ-	ñ-	ñu-/ñi-	ñu-/ñi-	w-	w-	u-	u-
VIII	t-	t-	tu-/ti-	tu-/ti-				
IX	d-	d-	-	du-/di-				
X	-	n-	-					

In the next section, I provide a detailed gender-by-gender discussion of the gender/agreement classes found in Eegimaa, including a discussion of plural syncretism in the plural forms of Gender III, V, and VII.[25] These forms, as can be seen in the agreement paradigms shown in Table 12, are phonologically identical expressions of plural number from different genders. The relationship between genders and nominal morphological classes that are also related to them is explained (see also Table 12). I begin with the most canonical instances of agreement and progress towards the least canonical cases. Semantic agreement is discussed in Section 3.5.3.13 with lexical hybrids.

3.5.3.1 Gender I a- & bug-: Human gender

Gender I is traditionally referred to as the human class pair and may therefore be termed the human gender. It has five related nominal morphological classes, which are discussed in Section 3.5.3.13 with lexical hybrids. It is illustrated in examples (29) and (30) with two singular nouns and one plural noun. As can be seen in the examples, the two singular nouns trigger consistent agreement in gender (Gender I) and number (Singular) inflectional features on all their targets. But agreement is not necessarily alliterative on all targets. For example, the definite article, which takes double agreement, does not have an initial consonant for Gender I singular (see (29) and (30)). But it does take an initial agreement

25 These syncretic plurals will be glossed Gender as III/V/VII.

marker in the plural (see (31)). Its second agreement marker, the suffix *-h*,[26] differs from the agreement marker *-m* of the demonstrative determiner. The pronoun *o*, which functions as an object relativiser in these examples, does not take an agreement marker in its singular form in Gender I but does for the plural and all other genders. Finally, the verb takes the prefix *a-*, which is the most common agreement marker for Gender I. The plural (cf. (31)), also controls consistent agreement in gender and number but does not trigger full alliterative agreement since the agreement markers on the definite determiner, the demonstrative and the pronoun formally differ from the marker on the verb.

(29) The human-denoting noun 'worker' in Gender I singular.

a-rokk-a	Øahu	u-m-u	o
CLa-work-AGT(I.SG)	I.SG.DEF	PRO-I.SG-MED	[I.SG]PRO
n-a-juh	me	a-tos-ut	
REAL-I.3SG-see	SUBORD	I.3SG-move-NEG	

'The worker, whom s/he saw, has not moved.'

(30) The human-denoting noun 'person' in Gender I singular.

an	Øahu	u-m-u	o
[Ø]person(I.SG)	I.SG.DEF	PRO-I.SG-MED	[I.SG]PRO
n-a-juh	me	a-tos-ut	
REAL-I.3SG-see	SUBORD	I.3SG-move-NEG	

'The person, whom s/he saw has not moved.'

(31) The human-denoting noun 'person' in Gender I plural.

bug-an	bugagu	u-bug-u	bug-o
CLbug-person(I.SG)	I.PL.DEF	PRO-I.PL-MED	I.PL-PRO
n-a-juh	me	gu-tos-ut	
REAL-I.3SG-see	SUBORD	I.3PL-move-NEG	

'Those people, whom s/he saw have not moved.'

Given that nominal morphological classes are treated separately from genders, it is worth noting that Gender I has five corresponding nominal morphological classes, as seen in Table 12. But note that excluding nominal morphological class Ø/*bug-*, which has one member, namely the noun *an* 'person' illustrated in (30)

26 The definite determiner shows double agreement marking resulting with the form *cl-a-cl-u*, where *CL-* represents an agreement consonant. The final vowel of the definite determiner alternates with the demonstrative suffixes such as the proximal demonstrative *-e* when it functions as a pronoun.

and (31), all plurals for Gender I nouns are lexical hybrids. Hybrids are examined in detailed in Section 3.5.3.12. In the singular, however, almost all nouns in Gender I take the prefix *a-* as a noun class prefix as in *a-rokka* 'worker' and trigger consistent agreement in gender and number.

3.5.3.2 Gender II e- & su-

Gender II is the default gender. Loanwords not directly integrated into other genders on phonological or semantic grounds are assigned to this gender. In the singular, as discussed in 3.5.1, there is phonologically-conditioned allomorphic variation in the form of the agreement markers between the prefixes *e-* and *y-*. As pointed out earlier, the alternation between *e-* and *y-* is lexically determined on nouns, contrary to its occurrence on agreement targets, where it is phonologically determined. Gender II nouns are grouped into three morphological classes and control canonical agreement, in that they trigger consistent agreement in gender and number in singular and plural, as can be seen in (32) and (33).

(32) A noun illustrating Gender II singular

e-joba	yayu	y-o	n-a-juh
CLE-dog(II.SG)	II.SG.DEF	II.SG-PRO	REAL-I.3SG-see
me	e-tos-ut		
SUBORD	II.SG-move-NEG		

'The dog that s/he saw has not moved.'

(33) A noun illustrating Gender II plural

su-joba	sasu	s-o	n-a-juh
CLsu-dog(II.PL)	II.PL.DEF	II.PL-PRO	REAL-I.3SG-see
me	su-tos-ut		
SUBORD	II.PL-move-NEG		

'The dogs that s/he saw have not moved.'

The three nominal morphological classes corresponding to Gender II include Ø/*su-*, exemplified by nouns like *púddum* 'viper'/*sú-puddum* 'vipers', which do not take prefixes in the singular but combine with *su-* in the plural. Another nominal morphological class is *y-*/*s-*, which has a few nouns like *y-on* 'crocodile'/*s-on* 'crocodiles'. However, most nouns of Gender II are found in the nominal morphological class *e-/su-*, whose markers show phonological identity between morphological marking for most Gender II nouns and agreement marking on some targets like the verb.

3.5.3.3 Gender III bu- & u-

There are three nominal morphological classes associated with Gender III. These classes, which are also presented in Table 12, are *b-*/*w-*, *bu-*/*u-* and *ba-*/*u-*. Nouns in these morphological classes trigger alliterative agreement in the singular. In the plural, the agreement prefix *u-* alternates with the semi-vowel *w-* in the same way as the agreement markers *e-* and *y-* discussed in 3.5.3.2, with *u-* before consonants, *w-* before vowels. On nouns, the prefix *w-* occurs as a plural marker preceding a vowel for only a few nouns. The noun class prefix *u-*, on the other hand can be attached to stems having either an initial vowel or a consonant, as explained in Section 3.5.1. Most importantly, Gender III nouns control consistent agreement in gender and number features on all targets, as can be seen in examples (34) to (35). It is worth pointing out that by knowing the singular agreement patterns triggered by a Gender III noun it is possible to predict its corresponding plural agreement patterns.[27] However, the reverse is not true, because the plural form of Gender III shows syncretism with the plural form for Genders V and /VII (see Table 12).

(34) A noun illustrating Gender III in the singular

bu-mangu		babu	b-o	n-a-juh
CLbu-mango(III.SG)		III.SG.DEF	III.SG-PRO	REAL-I.3SG-see
me	bu-tos-ut			
SUBORD	III.SG-move-NEG			

'The mango tree that s/he saw has not moved.'

(35) A noun illustrating Gender III in the plural

u-mangu		wawu	w-o	n-a-juh
CLu-mango(III/V/VII.PL)		III/V/VII.PL.DEF	III/V/VII.PL-PRO	REAL-I.3SG-see
me	u-tos-ut			
SUBORD	III/V/VII.PL-move-NEG			

'The mango trees that s/he saw have not moved.'

3.5.3.4 Gender IV fu- & gu-

Gender IV has four corresponding nominal morphological classes, namely *f-*/*g-*, *fu-*/*gu-*, *fa-*/*gu-* and *fa-*/*ga-*, which can also be seen in Table 12. All nouns from these nominal morphological classes trigger consistent and also alliterative

27 It should be borne in mind that we are only dealing with agreement morphology here, not nominal morphological marking.

agreement in gender and number feature values on all their targets, as illustrated in (36) and (37).

(36) A noun illustrating Gender IV in the singular

fu-mangu	fafu	f-o	n-a-juh
CLfu-mango(IV.SG)	IV.SG.DEF	IV.SG-PRO	REAL-I.3SG-see
me	fu-tos-ut		
SUBORD	IV.SG-move-NEG		

'The mango that s/he saw has not moved.'

(37) A noun illustrating Gender IV in the plural

gu-mangu	gagu	g-o	n-a-juh
CLgu-mango(IV.PL)	IV.PL.DEF	IV.PL-PRO	REAL-I.3SG-see
me	gu-tos-ut		
SUBORD	IV.PL-move-NEG		

'The mangoes that s/he saw have not moved.'

For most nouns, when the singular agreement pattern is known, the plural agreements can easily be predicted, and vice versa. But there is a category of nouns for which predicting the singular agreement patterns from the plural is less straightforward. These are nouns from inquorate Gender V/IV, which take agreements from Gender V in the singular and Gender IV in the plural (see Section 3.5.3.6).

3.5.3.5 Gender V ga- & u-

Gender V has two corresponding nominal morphological classes, namely *g-*/*w-* and *ga-*/*u-*. All nouns from this gender trigger alliterative agreement in the singular, and consistent agreement in gender and number features on all their agreement targets in both the singular and the plural. For the majority of nouns in the singular of Gender V (exemplified in (38) and (39)) it is possible to predict the plural agreement patterns once the singular patterns are known. But it is not possible to accurately predict singular agreement from the plural patterns of Gender V. This is because the plural of Gender V *w-*/*u-* is syncretic to that of Genders III and VII, meaning that a plural noun triggering Gender V agreement could also be from the latter two genders. Another reason why it is difficult to predict the singular gender membership of a noun from the plural of Gender V is because the inquorate gender V/IV, discussed in the next section, uses Gender V singular agreement and Gender IV agreement in the plural. In other words, some nouns which take Gender V singular do not take Gender V plural, but instead trigger Gender IV agreement.

(38) A noun illustrating Gender V singular

ga-ssin	gagu	g-o	n-a-juh
CLga-horn(V.SG)	V.SG.DEF	V.SG-PRO	REAL-I.3SG-see
me	gu-tos-ut		
SUBORD	V.SG-move-NEG		

'The horn that s/he saw has not moved.'

(39) A noun illustrating Gender V plural

u-ssin	wawu	w-o	n-a-juh
CLu-horn(III/V/VII.PL)	III/V/VII.PL.DEF	III/V/VII.PL-PRO	REAL-I.3SG-see
me	u-tos-ut		
SUBORD	III/V/VII.PL-move-NEG		

'The horns that s/he saw have not moved.'

3.5.3.6 Inquorate Gender V/IV ga- & gu-

As mentioned in the previous section, Gender V/IV is an inquorate gender and includes only three recorded nouns. An inquorate gender as defined in Corbett (1991: 171) is a gender which, as pointed out above, is made up of a small number of nouns and does not constitute a main gender, but takes singular agreement from one gender and plural agreement from another. Inquorate Gender V/IV controls singular agreement from Gender V (see Section 3.5.3.5) but its plural agreements from Gender IV, discussed in 3.5.3.4. In Eegimaa, as can be seen in (40) and (41), the noun *-ññen* 'hand' triggers agreement in Gender V on all its targets in the singular, but in the plural the targets take Gender IV.

(40) The singular agreement for the inquorate Gender VI/IV

ga-ññen	gagu	g-o	n-a-juh
CLga-hand(V.SG)	V.SG.DEF	V.SG-PRO	REAL-I.3SG-see
me	gu-tos-ut		
SUBORD	V.SG-move-NEG		

'The hand that s/he saw has not moved.'

(41) The plural agreement for the inquorate Gender VI/IV

gu-ññen	gagu	g-o	n-a-juh
CLgu-hand(V.PL)	IV.PL.DEF	IV.PL-PRO	REAL-I.3SG-see
me	gu-tos-ut		
SUBORD	IV.PL-move-NEG		

'The hands that s/he saw have not moved.'

3.5.3.7 Gender VI ju- & mu-

Gender VI is associated with diminutive expression, as the traditional labels singular and plural diminutive class pairs suggest. As the data in (42) and (43) show, the noun class prefixes and the agreement markers are phonologically identical and trigger alliterative agreement. Gender VI also shows canonical agreement since the same gender and number inflectional feature values are controlled on all the agreement targets. This gender has four main associated nominal morphological classes, namely the singular-plural pair *ju-*/*mu-*, the class *ja-*, and the plurale tantum *m-* and *ma-*. The *ju-*/*mu-* morphological class contains nouns that, semantically, denote small entities and are not the result of evaluative morphology formation. It is worth noting that knowing the singular agreement patterns for nouns from this gender is sufficient to predict the corresponding plural agreements.

(42) Illustration of Gender VI singular

ji-ttaja	jaju	j-o	n-a-juh
CLju-firefinch(VI.SG)	VI.SG.DEF	VI.SG-PRO	REAL-I.3SG-see
me	ju-tos-ut		
SUBORD	VI.SG-move-NEG		

'The firefinch that s/he saw has not moved.'

(43) Illustration of Gender VI plural

mu-ttaja	mamu	m-o	n-a-juh
CLmu-firefinch(VI.PL)	VI.PL.DEF	VI.PL-PRO	REAL-I.3SG-see
me	mu-tos-ut		
SUBORD	VI.PL-move-NEG		

'The firefinches that s/he saw have not moved.'

Nominal morphological classes *m-* and *ma-* include non-count nouns which trigger the plural agreement as count nouns (compare with example (43)), as can be seen in examples (44) and (45). This is why they are treated as part of the plural genders.

(44) Illustration of nominal morphological class *m-*

m-al	mamu	m-o	n-a-juh
CLm-water(VI.PL)	VI.PL.DEF	VI.PL-PRO	REAL-I.3SG-see
me	mu-tos-ut		
SUBORD	VI.PL-move-NEG		

'The water that s/he saw has not moved.'

(45) Illustration of nominal morphological class *ma-*

ma-ttaño	mamu	m-o	n-a-juh
CLma-difficulty(VI.PL)	VI.PL.DEF	VI.PL-PRO	REAL-I.3SG-see
me	mu-faf-e		
SUBORD	VI.PL-be.excessive-CPL		

'The difficulties that s/he experienced are excessive.'

The prefix *ja-* is found with one lexical noun, *ja-mmeŋ* 'crowd', as exemplified in (46); it triggers Gender V agreement.[28] As I show in Chapter V it is also found with nouns like *ja-açer* 'ground rice', where it occurs as a collective marker, and in the context of personification as in *ja-jjamen* '(personified) Goat'. I will argue in Chapter V that these are pragmatic uses of this prefix.

(46) Gender VI in collective expressions

ja-mmeŋ	jaju	j-o	n-a-juh
CLja-crowd(VI.SG)	VI.SG.DEF	VI.SG-PRO	REAL-I.3SG-see
me	ju-tos-ut		
SUBORD	VI.SG-move-NEG		

'The crowd that s/he saw has not moved.'

Note that the prefix *ja-* is used predominantly with non-finite verbs, which have nominal and verbal properties, as shown in Chapter 4. In their nominal functions, non-finite verbs occur in argument position, as in (47), where the non-finite verb *ja-baloŋ* 'football/play football/playing football' occurs as a noun and triggers agreement in gender and number on all agreement targets.

(47) A non-finite verb in a nominal function and, Gender VI agreement

ja-baloŋ	jaju	j-o	n-a-juh
CLja-football(VI.SG)	VI.SG.DEF	VI.SG-PRO	REAL-I.3SG-see
me	ju-tos-ut		
SUBORD	VI.SG-move-NEG		

'The football match that s/he saw was not moved.'

28 The prefix *ja-* is generally used as a marker of personification for nouns denoting non-human entities as in *ja-ttaja* 'firefinch personified'. Personified nouns trigger Gender I singular agreement (see Section 3.5.3.1 above). The plural for personified nouns is formed by attaching the associative plural *-i* to those nouns and using Gender I plural agreement on targets. This might be an argument for also including the prefix *ja-* as one of the prefixes of the morphological classes linked to Gender I. However, I consider this to be a pragmatic use of this prefix, hence its assignment to Gender VI.

3.5.3.8 Inquorate Gender VI/IV ju- & gu-

Inquorate Gender IV/VI has only one noun, which takes NCPs *ju-* and *gu-* in the singular and plural, respectively. In terms of agreement, it exhibits Gender VI syntactic agreement in the singular (see (48)), but its plural agreement is from Gender IV as shown in example (49).

(48) Illustration of Gender VI singular

jí-çil	jaju	j-o	n-á-sotten
CLju-eye(VI.SG)	VI.SG.DEF	VI.SG-PRO	REAL-I.3SG-treat
me	ju-hoy-ut		
SUBORD	VI.SG-heal-NEG		

'The eye that s/he treated has not healed.'

(49) Illustration of Gender VI plural

gú-çil	gagu	g-o	n-á-sotten
CLgu-eye(VI.SG)	VI.PL.DEF	VI.PL-PRO	REAL-I.3SG-treat
me	gu-hoy-ut		
SUBORD	VI.PL-heal-NEG		

'The eyes that s/he treated have not healed.'

3.5.3.9 Gender VII ñu- & u-

Gender VII has three nominal morphological classes, namely *ñu-*/*u-*, *ñ-* and *ña-*, as can also be seen in Table 12. The last two nominal morphological classes are singulare tantum. As shown in examples (50) and (51), nouns in gender VII trigger consistent agreement in gender and number features on all their targets, though only the singular shows alliterative agreement. From the singular agreement patterns, it is possible to predict the plural for Gender VII. However, the reverse is not possible because the plural form of this gender is syncretic with that of Genders III and V.

(50) Illustration of Gender VII singular

ñu-hul	ñañu	ñ-o	n-a-juh
CLñu-funeral(VII.SG)	VII.SG.DEF	VII.SG-PRO	REAL-I.3SG-see
me	ñu-tos-ut		
SUBORD	VII.SG-move-NEG		

'The funeral that s/he saw has not moved.'

(51) Illustration of Gender VII plural

u-hul	wawu	w-o	n-a-juh
CLu-funeral(III/V/VII.PL)	III/V/VII.PL.DEF	III/V/VII.PL-PRO	REAL-I.3SG-see
me	u-tos-ut		
SUBORD	III/V/VII.PL-move-NEG		

'The funerals that s/he saw have not moved.'

3.5.3.10 Gender VIII t-

Gender VIII is a non-pairing locative gender which expresses precise location.[29] It has only two recorded nouns: *ti-nah* 'sun/time' and *t-iñ* 'precise place'. Nouns of gender VIII trigger alliterative agreement between the nominal prefix and the agreement markers. The feature values controlled by these nouns are consistent on all agreement targets, as shown in (52).

(52) Illustration of Gender VIII plural

ti-nah	tatu	t-o	n-a-juh
CLti-sun(VIII.SG)	VIII.SG.DEF	VIII.SG-PRO	REAL-I.3SG-see
me	tu-tos-ut		
SUBORD	VIII.SG-move-NEG		

'The sun which s/he saw has not moved.'

3.5.3.11 Gender IX *d-*

Gender IX, illustrated in (53), is another locative non-pairing gender, expressing location inside a place. As shown in the agreement marking on targets, it exhibits syntactic agreement by triggering the same feature values as well as alliterative agreement on its targets.

(53) Illustration of Gender IX plural

d-iñ	dádu	d-ó	n-a-juh
CLd-place(IX.SG)	IX.SG.DEF	IX.SG-PRO	REAL-I.3SG-see
me	dí-sikki-ut		
SUBORD	IX.SG-be.deep-NEG		

'The inside location that s/he saw is not deep.'

29 Eegimaa has another locative marker that expresses general location. It is assigned Gender III because its agreement markers are identical to the singular agreement markers of that gender.

3.5.3.12 Gender x *n-*

Gender x has no corresponding nominal morphological class because no lexical noun triggers its agreement. The lack of nouns to trigger agreement in Gender x shows that an agreement class can exist without a related nominal morphological class. This is further evidence that nominal morphological classes are not necessarily linked to agreement classes. Gender x is non-pairing because there are no expressions of singular/plural values for it. One important property of this gender is that it is defective in the sense that only some targets can take agreement markers. These are generally pronouns, as exemplified in (54).

(54) Illustration of Gender x plural

nanonan	n-o	nu-jug-ol
x.QUANT	x-PRO	2SG-see-3SG.OBJ

'Any time you see him/her.'

All the genders discussed above exhibit syntactic or formal agreement, showing the same feature values on all their targets. In the next section, I examine the kind of semantic agreement triggered by lexical hybrids and relate them to the Agreement Hierarchy prediction.

3.5.3.13 Lexical hybrids in Eegimaa grammar

Lexical hybrids control semantic agreement in different domains, i.e. in the NP and beyond. Typological research on hybrids has been carried out mainly in Indo-European languages (Corbett 1979; 1991; 2015; Hundt 2006; Levin 2001). In African languages, however, though the existence of hybrids has been reported (see Corbett 1991 for references), they have rarely been subject to analysis. Here, I present an analysis of lexical hybrids in Eegimaa based on the Agreement Hierarchy constraints as proposed in Corbett (1979, 1983, 2006). According to the predictions of the Agreement Hierarchy, semantic agreement follows a hierarchy composed of the four levels presented in Figure 1: attributive, predicate, relative pronoun, and personal pronoun. The prediction is that if semantic agreement is attested at a level to the left in the hierarchy, it will also be attested at all levels to the right.

Attributive > predicate > relative pronoun > personal

Figure 1: The Agreement Hierarchy, based on (Corbett 1979; 1991; 2006).

The analysis of semantic agreement, in this chapter, is restricted to the lexical hybrids in Eegimaa. In Sagna (2019b), I propose a more comprehensive analysis of different kinds of agreement mismatches, including those triggered by lexical hybrids, location nouns and constructional mismatches. I argue that the various instances of semantic agreement observed in Eegimaa can be divided into two main types: a) human semantic agreement, which is triggered by lexical hybrids and location nouns that can also refer to human collectivities, e.g. villages, and b) locative semantic agreement triggered by locative nouns and nouns denoting containers. I show that these two types of semantic agreement behave differently with respect to the Agreement Hierarchy.

3.5.3.13.1 One full lexical hybrid: *bájur* 'young woman'

A full hybrid is a noun that controls different agreements on different targets in both singular and plural. Full hybrids are rare across the languages of the world. The rare instances that have been discussed in the literature have been reported for Old High German and Icelandic (Corbett 2015). In Eegimaa *bá-jur* 'young woman' is the only noun that functions as a full hybrid. In the singular, as can be seen in example (55), it triggers obligatory Gender III agreement on the definite determiner, but all other targets take Gender I agreement. Thus, there is a mismatch in the gender inflectional feature between the different agreement targets. There is also a split in the expression of the gender agreement feature at the level of the NP (attributive level), because the definite determiner takes Gender III while the demonstrative determiner *umu* 'that' takes Gender I agreement, as can be seen by the change in Roman numerals which indicate gender agreement.

(55) Semantic agreement with the noun bá-jur 'young woman'

bá-jur	babu	umu	n-a-kk'
CLba-young.woman(III/I.SG)	III.SG.DEF	I.SG.MED	REAL-I.3SG-leave
a-juh	á-pur		
I.3SG-see	CLa-young.man(I.SG)		

'That young woman went to see a young man.' (ss2004Oct13_baluten)

It is important to bear in mind that, in the singular, syntactic agreement is also possible, as can be seen from the elicited data in example (56). However, *bá-jur* 'young woman' is mostly used as a hybrid in natural speech, as in example (55), taken from a folktale.

(56) Syntactic agreement with the noun bá-jur 'young woman'
bá-jur babu bu-vvugul babu
CLba-young.woman(III.SG) III.SG.DEF III.SG-new III.SG.DEF
bu-kka-e
III.SG-leave-CPL
'The new young woman has left.' (ss20131221_AmT)

In the plural, 'young woman' can only function as a hybrid. Syntactic agreement is not allowed beyond the definite determiner, as shown by the ungrammaticality of example (58). The occurrence of 'young woman' as a hybrid in the plural is illustrated in example (57), where it triggers agreement from Gender II on the definite determiner *sasu*, whereas the agreement on the adjective *gu-vvugul* 'new', its definite modifier *gagu* and the verb *gu-kkae* 'have left' are from Gender I. Here again there is a mismatch in Gender agreement since the same controller noun triggers different agreements on different targets. There is also a split at the attributive level of the agreement hierarchy since agreement in both Gender I and Gender II are triggered on the definite determiner and the adjective within the same NP.

(57) Plural hybrid for 'young woman'
sú-jur sasu gu-vvugul gagu gu-kka-e
CLsu-young.woman(II/I.PL) II.PL.DEF I.PL-new I.PL.DEF I.3PL-leave-CPL
'The new young women have left.' (ss20131221_AmT)

(58) Ungrammatical consistent agreement with the noun sú-jur 'young woman'
*sú-jur sasu su-vvugul sasu su-kka-e
CLsu-young.woman(II.PL) II.PL.DEF II.PL-new II.PL.DEF II.PL-leave-CPL
'*The new young women have left.' (ss20131221_AmT)

In terms of agreement class assignment, the data discussed in these examples shows that the noun 'young woman' shows multiple gender membership since it triggers agreement from different genders. I have previously described this as a case of multiple "morphosyntactic assignment" which reflects "multiple semantic categorisation assignment" (Sagna 2012). This issue is also discussed in further detail in the next chapter on the semantics of noun classes.

3.5.3.13.2 Split hybrids: Hybrids in the plural only

Except for *bug-an* 'people', discussed in Section 3.5.3.1, all plural nouns of human denotation from Gender I are hybrid nouns. But note that they are hybrids in the

plural only and not in the singular. Nouns that are hybrids only in the expression of one feature value, for example, in the plural only, are termed "split hybrids", following Corbett (2015). The contrasts between singular and plural agreements for split hybrids can be seen in examples (59) to (66).

Examples (59) and (60) illustrate split hybrids nouns in the plural with human nouns from nominal morphological class *a-*/*e-*. They show that in the singular the noun 'banjal person', used for illustration, controls consistent agreement in gender (Gender I) and number (singular) on all its targets. In the plural (cf. example (60)), by contrast, the agreement it triggers is inconsistent. It takes Gender II singular agreements on the definite determiner, and Gender I plural agreement on the demonstrative determiner and the verb. Thus, there is a mismatch in gender (between Gender II and Gender I) and in number (between singular and plural). It is also worth noting that at the level of the NP (the attributive level of the agreement hierarchy), the expression of gender and number are split. This means that within the same NP in example (60), the definite determiner shows Gender I singular agreement, whereas the demonstrative determiner exhibits two different feature values, namely, Gender I and plural agreement.

(59) Consistent agreement with the singular noun 'banjal person'

a-banjal	Øahu	umu	n-a-kka-e
CLa-banjal(I.SG)	I.SG.DEF	I.SG.MED	REAL-I.3SG-leave-CPL

'That person from Banjal has left.' (ss20060420_HB)

(60) Split agreement with the plural for the noun 'banjal people'

e-banjal	yayu	ubugu	gu-kka-e
CLe-banjal(II.SG/I.PL)	II.SG.DEF	I.PL.MED	I.3PL-leave-CPL

'Those people from Banjal have left.' (ss20060420_HB)

Nouns of human denotation from nominal morphological class *a-*/*u-* exemplified in (61) and (62) are also split hybrids. As the data in these examples show, they trigger consistent agreement in gender and number in the singular but in the plural, they control Gender V agreement on the definite determiner and Gender I on the demonstrative determiner and the verb. Here there is a mismatch only in the gender inflectional feature, since the plural number value consistently appears on all targets. The expression of the gender feature value also shows a split. This can be seen in the expression of gender agreement at the attributive level since the definite determiner and the demonstrative determiner control Gender V and Gender I agreement, respectively.

(61) Consistent agreement triggered by the noun 'farmer' in the singular

a-añ-a	Øahu	umu	n-a-kka-e
CLa-farm-AGT-(I.SG)	I.SG.DEF	I.SG.MED	REAL-I.3SG-leave-CPL

'That farmer has left.' (ss20060420_HB)

(62) Agreement mismatches triggered by the noun 'farmer' in the plural

u-añ-a	wawu	ubugu	gu-kka-e
CLu-farm-AGT(III/V/VII.PL/I.PL)	III/V/VII.PL.DEF	I.PL.MED	I.3PL-leave-CPL

'Those farmers have left.' (ss20060420_HB)

There are only two nouns in nominal morphological class *Ø-/su-*: *payya* 'father' and *jayya* 'mother'. As can be seen by comparing examples (63) and (64), where the noun *payya* 'father' is used for illustration, there is syntactic agreement in gender and number in the singular. But in the plural, shown in (64), a mismatch in Gender with Gender II is possible at the attributive level, although the preferred agreement is with Gender I.

(63) Syntactic agreement for 'father' in the singular with Gender I

Ø-payya	a-humu	a-baj-ut
father(I.SG)	I.SG-DEM.MED	I.3SG-have-NEG

'That (kind of) father does not exist.'

(64) Possible split agreement for 'father' in the plural with Gender II & Gender I

si-payya	sasu	/bugagu	ubugu	gu-baj-ut
CLsu-father(II.PL/I.PL)	II.PL.DEF	/I.PL.DEF	I.PL-DEM.MED	I.3PL-have-NEG

'Those (kinds of) fathers do not exist.'

The last category of nouns of human denotation, which are hybrids in the plural only, are those of nominal morphological class *a-/gu-*. Like those in the examples above, these nouns control canonical/syntactic agreement in the singular only, as shown in (65). In the plural, as shown in example (66), they trigger inconsistent agreement with Gender IV on the definite determiner but Gender I on the demonstrative determiner and the verb. Since the plural number value is triggered on all targets, there is agreement mismatch only in the gender feature. However, similar to the other instances of split agreement presented above, the mismatch in gender agreement also occurs at the attributive level, where the definite determiner takes Gender IV agreement whereas the demonstrative determiner takes Gender I.

(65) Consistent agreement triggered by the noun ‘friend’ in the singular

a-buge	Øahu	umu	n-a-kka-e
CLa-friend(I.SG)	I.SG.DEF	I.SG.MED	REAL-I.3SG-leave-CPL

‘That friend has left.’ (ss20060420_HB)

(66) Agreement mismatches triggered by the noun ‘friend’ in the plural

gu-buge	gagu	ubugu	gu-kka-e
CLgu-friend(V.PL/I.PL)	IV.PL.DEF	I.PL.MED	I.3PL-leave-CPL

‘Those friends have left.’ (ss20060420_HB)

In summary, the one full hybrid and the split hybrids discussed above show that not all nouns trigger consistent agreement on all their targets in Eegimaa. There are nouns that control different agreements on different targets. One of these nouns, ‘young woman’, is a full hybrid whereas all the others are split hybrids in that they occur only as hybrids in the plural. But these nouns have in common that they are all nouns of human denotation. In Chapter V, I will show that use of different agreements from various agreement classes/genders with full and split hybrids is a form of multiple morphosyntactic classification, which reflects multiple semantic categorisations of the referents denoted by controller nouns. An important point to remember from this section is that hybrid nouns do not create new agreement classes but use agreements from the different gender agreement classes discussed in Section 3.5.3.

3.6 Summary

In this chapter, I examined the noun class/gender system found in Eegimaa by separating nominal morphological classes or paradigms from agreement classes or genders. The chapter begins with a discussion of terminological issues, where I show that the terms “noun class” and “gender” are used in different ways in the linguistics literature. On the one hand, these terms are used interchangeably to refer to a kind of system of nominal classification, which is fundamentally based on agreement. On the other hand, “gender” and “noun class” are not interchangeable when used to refer to the sets to which nouns are assigned based on agreement criteria. There are several approaches used to identify the classes to which nouns are assigned in a noun class system of the Niger-Congo type. The traditional and most commonly used approach divides nouns into classes based on the agreement patterns they trigger and separating singular and plurals into different classes. One of the main criticisms towards this approach is that the term “class” is used inconsistently to refer to the morphological classification of

nouns and their classification based on agreement. Recent studies have suggested that the analysis of noun class systems should be based primarily on paradigms. While this way of analysing noun class system separates the morphological level from agreement as suggested by authors in the general linguistics literature (Corbett 1991; Aronoff 1994), it fails to provide an improved analysis of the agreement systems compared to the traditional approach. The approach used in this book separates nominal morphological classes (paradigms) from agreement classes, following Corbett's and Aronoff's arguments that morphology must be analysed by itself. Here an agreement class is a paradigm of agreement morphology with singular and plural patterns analysed as a unit. This approach was used to reveal the different nominal morphological classes and the genders found in Eegimaa. It also appears to be the best way of accounting for agreement mismatches triggered by lexical hybrids. In Chapter V, I will study the semantic properties of the Eegimaa noun class system, which, I will argue, are in many ways a reflection of the morpho-syntactic classification of nouns.

4 Non-finite verbs and their classification

4.1 Introduction

In Chapter I, I argued that Eegimaa and some other related languages, especially those of the Jóola cluster, have the unusual property of forming non-finite verbs, such as the equivalent of infinitives using several different noun class markers. This observation has been around since the early descriptions of Jóola languages (Weiss 1939; Kennedy 1964; Sapir 1965). My innovation on this topic (see e.g. Sagna 2007; 2008; Schultze-Berndt & Sagna 2010), has been to argue that non-finite verbs, which must take a noun class prefix in these languages, are morphologically classified, and that this formal classification reflects a semantically motivated cognitive categorisation of events (see Chapter IV). I also argue that this phenomenon should be analysed as a typologically unusual form of overt verb classification as demonstrated in Chapter I.

The goal of this chapter is to investigate the nature of non-finite verb forms and to justify the claim that they are classified in Eegimaa. The chapter begins with a study of non-finiteness in Eegimaa from a broader functional typological perspective in Section 4.2. In Section 4.3, I examine the nominal and verbal properties of Eegimaa non-finite verbs and show that they have mixed nominal and verbal properties, similar to other mixed categories reported in the typological literature (e.g. Bresnan 1997; Bresnan & Mugane 2006). Section 4.4 presents the different overt verb classes into which Eegimaa non-finite verbs are grouped and surveys the classification of non-finite verbs derived through valency operations, as well as borrowed verbs from Wolof and French. This section also briefly presents cases of alternations where the same stem can allow the alternation of different prefixes. I will argue in Chapter VII that such alternations are motivated by differences in transitivity. In Section 4.5, I study the nature of non-finite verbs by comparing the properties of Eegimaa non-finite verbs to deverbal nouns, infinitives, and action nouns such as verbal nouns and converbs. Finally, section 4.6 summarises the discussion.

4.2 The finite versus non-finite distinctions

The main cross-linguistic types of non-finite forms are infinitives, gerund, verbal nouns/masdars, participles and converbs. Finiteness is traditionally viewed as a property of the verb. The traditional and indeed the standard grammatical categories taken to be relevant for the finite and non-finite distinctions include the

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presence or absence of subject agreement, TAM marking and the ability to occur in main clauses.

From a cross-linguistic perspective, there are many problems associated with the view that the finite/non-finite distinction is a verbal category, which makes it unsuitable as a universal definition of finiteness. A number of authors provide detailed discussions of these issues which include the following (see e.g. Givón 1990; Hengeveld 1998; Maas 2004; Nikolaeva 2007; 2013; Cristofaro 2007). The subject agreement defining criterion for finiteness is not applicable to languages like Chinese and Vietnamese which do not exhibit verbal morphology. Viewing the presence of subject agreement as an indication of finiteness is also problematic for a language like European Portuguese, where infinitives show agreement (Nikolaeva 2007: 6). There are languages where "non-finite forms with reduced tense and agreement can function as the only predicate in a clause" (Nikolaeva 2007: 3).

Unlike the traditional approach, both functional and formal theoretical approaches view finiteness as a property of the clause. In functional approaches, finiteness is generally viewed as a scalar phenomenon in which individual languages can be situated (e.g. Givón 1990; Cristofaro 2007). Note, however, that within functional approaches, it has also been suggested that finiteness can be viewed as a binary/discrete category. Bisang (2007: 121–122) argues that "if finiteness is defined in terms of the categories that are to be morphologically or syntactically expressed in independent vs. dependent clauses of individual languages, it turns out that finiteness is a discrete or binary phenomenon". The binary approach to finiteness is also standard in formal approaches to linguistics, where it is primarily viewed as an abstract property of the clause which is only secondarily marked on the verb (see e.g. Adger 2007; Sells 2007).

In the next section I investigate the properties which are relevant to finite/non-finite distinctions in Eegimaa by using criteria developed from the perspective of canonical typology in Nikolaeva (2013). These criteria are based on the argument that three different levels should be taken into account in distinguishing finiteness-related phenomena, namely the morphological, the syntactic and semantic/pragmatic levels (see e.g. Koptjevskaja-Tamm 1999; Maas 2004; Bisang 2007; Nikolaeva 2013). Table 14 provides a summary of grammatical categories, which in Eegimaa help to distinguish finite verb forms from their non-finite counterparts. Some of the most crucial of these categories are discussed in Subsections 4.2.1 to 4.2.3, while others will be included in Section 4.3. The first five categories in Table 14 can be grouped under the morphological properties distinguishing finite forms from non-finite ones. Syntactic properties of finiteness (sixth category in the table) are illustrated here with the ability for a clause to take an overt subject. Finally, semantic/pragmatic properties of the finite/non-finite distinction are illustrated with the ability to express assertions.

Table 14: Grammatical categories distinguishing finite and non-finite forms in Eegimaa.

Categories	Finite	Non-finite
Combinability with subject agreement prefixes	+	–
Combinability with TAM markers	+	–
Combinability with noun class markers	–	+
Functioning as predicates of independent clauses	+	–
Combinability with possessive suffixes	–	+
Taking subject argument	+	–
Expression of assertions	+	–

4.2.1 Morphological properties of finiteness in Eegimaa

The most relevant morphological criteria for the finite/non-finite disinctions in Eegimaa are Nikolava's (2013: 105) canonical criteria C1 to C3, which stipulate that the presence of tense, subject agreement, and mood and/or illocutionary marking is more canonical than the absence of these features.

In Eegimaa only finite verbs (not non-finite ones) can take subject agreement and TAM marking. This is illustrated in (1), where the finite verb takes an obligatory subject agreement prefix *a-*, preceded by the realis mood marker *n-*. The subject marker shows agreement in grammatical gender (Gender I), person (3rd person) and number (singular). The verb of the independent clause also exhibits other characteristics traditionally associated with finite forms by taking the TAM completive suffix *-e*. For a more detailed description of the Eegimaa TAM morphology, see Chapter II.

(1) Finite clause with a verb taking an agreement prefix and TAM markers
Joutibo n-a-rus-e e-mmano-ol
Joutibo(I.SG) REAL-I.3SG-mow-CPL CLe-rice(II.SG)-3SG.POSS
'Joutibo has mowed his rice.'

(2) A complex sentence including a dependent clause with the non-finite verb 'mow'
Joutibo n-a-kkay-e ga-rus e-mmano-ol
Joutibo(I.SG) REAL-I.3SG-go-CPL CLga-mow CLe-rice(II.SG)-3SG.POSS
'Joutibo has gone [to the rice fields] to mow rice.' (Part-obsv2008)

Example (2) shows the verb 'mow' in its non-finite form. Unlike the main verbs of finite clauses, non-finite verbs like *ga-rus* 'mow/mowing' do not combine with

TAM markers,[30] nor do they take an obligatory subject agreement prefix. Instead, they show characteristics of nouns by taking noun class prefixes like *ga-*, which occur in the same slot as subject agreement prefixes found in finite verbs. This illustrates a loss of TAM and agreement marking and the acquisition of nominalising morphology.

4.2.2 Syntactic properties of finiteness: Taking subject argument

The syntactic criteria distinguishing the finite and non-finite forms operate at the clausal level. The idea is that cross-linguistically, independent clauses, which generally contain verbs taking TAM and agreement prefixes, are more canonical than dependent clauses in the sense that they have more prototypical verbs properties than dependent clauses (see Nikolaeva's Canonical criterion C8). Cross-linguistically, TAM features are reduced in dependent clauses, or they are simply unacceptable, as is the case in Eegimaa. This syntactic criterion is illustrated in example (1) which contains an independent clause with a verb taking TAM and agreement marking. Example (2) also illustrates this criterion with a dependent clause (a less canonical one) where the non-finite verb *ga-rus* 'mow/mowing' cannot take inflection marking like the completive suffix *e-*.

Another syntactic criterion relates to subject licensing: Nikolaeva's (2013: 109) Criterion 9. This criterion states that canonical finite clauses take overt subjects, whereas canonical non-finite ones do not. Again, this is illustrated in example (1), where the independent clause has an overt subject, contrasting with the dependent clause in example (2) where no overt subject is allowed.

4.2.3 Semantic/pragmatic properties of finiteness: Expression of assertion

The semantic/pragmatic properties which are relevant to the finite/non-finite distinctions in Eegimaa include the ability for finite clauses to express assertions and describe events which may be anchored in time (Criteria 11 and 12). This is exemplified in (3) (see also example (1)), where the utterance describes an event which is located in a specific time with a time adverbial.[31] Note that using the adverbial 'yesterday' in a dependent clause to express temporal anchoring as in (4) would yield an infelicitous sentence.

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30 **ga-rus-e* with the completive suffix *-e* would be an unacceptable word form.

31 Eegimaa has a predominantly aspectual system.

(3) Assertive utterance expressed in a finite clause

Joutibo	n-a-rus-e	e-mmano-ol	figen
Joutibo(I.SG)	REAL-I.3SG-mow-CPL	CLe-rice(II.SG)-3SG.POSS	yesterday

'Joutibo mowed his rice yesterday.'

(4) Ungrammatical assertion in a non-finite clause

*Joutibo	ga-rus	e-mmano-ol	figen
Joutibo(I.SG)	CLga-mow	CL3-rice(II.SG)-3SG.POSS	yesterday

'*Joutibo mowing his rice yesterday.'

In summary, Eegimaa non-finite verb forms can be distinguished from their finite counterparts based on various features, which have been presented as canonical features of finiteness. Morphologically, finite forms are characterised by their ability to take subject agreement prefixes and TAM markers, whereas non-finite forms can only take noun class prefixes, which are mutually exclusive with subject agreement prefixes. Non-finite forms are also incompatible with TAM markers. Syntactically, Eegimaa independent clauses are finite as predicted by the canon whereas dependent clauses are not finite. Last but not least, Eegimaa independent clauses encode assertions and are anchored in time, whereas non-finite forms cannot be anchored in time. Note that that the Eegimaa finite/non-finite distinctions can be captured using the binary feature approach as suggested in Bisang (2007), since the categories that distinguish them are based on the presence or absence of features presented in Table 14 in independent and dependent clauses.

The properties that distinguish Eegimaa finite forms from their non-finite counterparts also show that non-finite forms in Eegimaa have mixed nominal and verbal characteristics, as demonstrated in the next section.

4.3 Nominal and verbal properties of Eegimaa non-finite verbs

4.3.1 Nominal properties of Eegimaa non-finite verbs

The nominal morphological and syntactic properties of Eegimaa non-finite verbs discussed below show that these forms are nominalised.

4.3.1.1 Morphological properties

The main nominal morphological properties of Eegimaa non-finite verbs are their ability to combine with noun class markers, and their combination with possessive suffixes. As pointed out in example (2) with the non-finite verb *ga-rus* 'to

mow/mowing', Eegimaa non-finite verbs take noun class markers just like nouns (see Chapter II). Both singular and plural prefixes from the nominal domain are used to form these non-finite verbs. While class markers attach to nouns to inflect for number, distinguishing singular and plural by alternating prefixes as in *e-vval* 'stone' and *si-vval* 'stones', the combination of singular and plural noun class prefixes with non-finite verb forms is lexically determined and has nothing to do with the expression of the singular and plural number feature values. Example (5) illustrates the use of different singular and plural noun class prefixes to form non-finite verbs.

(5) Singular and plural noun class prefixes on Eegimaa non-finite verbs
Singular prefixes
e-ber 'to laugh/laughing'/laughter'
bu-llujor 'to spy on/spying on'
fú-rosor 'to play/playing/game'
ba-vvu 'to sweep/sweeping'
gá-mmori 'to sleep/sleeping/sleep'
Plural prefixes
si-ttehumor 'to hesitate/hesitating/hesitation'
u-kkoŋ 'to cry/crying'
gú-mmeñ 'to slander/slandering'
ma-rem 'to drink/drinking'
mu-jah 'to be intelligent/intelligence'

The other nominal property of Eegimaa non-finite verbs is their ability to combine with possessive suffixes. This is illustrated in (6) and (7), where the possessive suffix *-ol* attaches to the non-finite verb *gá-sotten* 'to treat/treating/treatment' and the non-derived noun *gá-juo* 'shirt'.

(6) Combination of a possessive suffix with a non-finite verb
gá-sotten-ol gajem
CLga-treat-3SG.POSS tomorrow
'His/her treating/treatment is tomorrow/treating him will be tomorrow.'
(ss20161008_MNS)

(7) Combination of a possessive suffix with noun
gá-juo-ol gu-kkur-e
CLga-shirt(V.SG)-3SG.POSS V.SG-be.clean-CPL
'His/her shirt is clean.'

It is worth noting that with transitive verbs, when possessive suffixes like *-ol* are present on non-finite forms, there is possible ambiguity between subject and object interpretations of the antecedent of the possessive suffix. In example (6) for instance, the antecedent of the possessive suffix can be interpreted as an object, in which case the suffix refers to the patient argument, and the reading of the sentence would be 'treating him'. A second possible interpretation is that the antecedent of the suffix is the subject and is thus the agent doing the treating. Such ambiguities can be resolved by adding an overt object as in (8). In this case, the only possible interpretation for the referent of the possessive suffix would be as an agent. Note, as is generally the case in Eegimaa, that the object is not morphologically marked as an object.

(8) Possessive suffix with non-finite verbs - disambiguation
gá-sotten-ol u-ñ̃ñil gajem
CLga-treat-3SG.POSS CLu-child(V.PL) tomorrow
'His treating children is tomorrow.'

4.3.1.2 Syntactic properties of the non-finite verbs

Non-finite verbs have syntactic properties typically associated with nouns, as shown by their distribution and the kinds of modifiers they take.

Argument functions. Eegimaa non-finite verb forms function as arguments in clauses just like non-derived nouns (see Chapter II). As a result, they show external NP distribution. This is exemplified in (9) where the non-finite verb *u-kkoŋ* 'to cry/crying' functions as a subject, occurring in preverbal position and controlling agreement in gender and number on dependents and also other targets like the finite verb. Eegimaa non-finite verbs also occur as semantic nuclei of the complement of complement-taking predicates as illustrated in example (10) where the non-finite verb *u-kkoŋ* 'cry/crying' is found in object position. A more detailed discussion of complementation and non-finiteness, including the kind of complement-taking predicates found in Eegimaa is provided in Section 4.3.1.3.

(9) The non-finite verb *u-kkoŋ* 'to cry/crying' heading an NP in subject function
u-kkoŋ wawu u-ttog-e!
CLu-cry(V.PL) V.PL.DEF V.PL-be.sufficient-CPL
'Lit: The crying is enough!' (Part-obsv2008)

(10) The non-finite verb *u-kkoŋ* 'to cry/crying' heading an NP in object function
u-hat u-kkoŋ wouwu
2SG-stop CLu-cry(V.PL) V.PL.DEM.MED
'Lit: stop that crying.' (part-obsv2008)

Heads of NP and modification. Non-finite verbs function as heads of noun phrases and show internal NP syntax. They can be modified by determiners like the definite determiner exemplified in (9) or demonstratives as illustrated in example (10). They can also be modified by a few of the small list of underived adjectives. Eegimaa has a small class of around 20 such adjectives (Sagna 2008: 133–134). Example (11) illustrates the combination of a non-finite verb in a nominal function and an adjectival modifier. It is important to note that most property concepts coded as adjectives in languages like English are expressed by stative verbs in Eegimaa. There are selectional restrictions on the permissible combination between individual non-finite verbs and underived adjectives, which deserve a separate detailed study. In addition to the underived adjectives, Eegimaa also has a larger list of adjectives derived from ethnonymic nouns, which also combine with non-finite verbs as illustrated in (12).

(11) Modification of a non-finite verb by an adjective
jama fi-tiñ f-ámah fu-baj-e Enappor
today CLfu-eat(IV.SG) IV.SG-big IV.SG-have-CPL Enappor
'Today there is a big eating (feast) event in Enappor.'

(12) Modification of a non-finite verb by a derived adjective
á-ju-ut já-kkuj ji-mandiŋ-ay
I.SG-be.able-NEG CLja-wrestle(VI.SG) VI.SG-mandingo-ABSTR
'S/he is not able to wrestle the mandingo way.'

Heading relative clauses. Eegimaa non-finite verbs can head relative clauses just like nouns. This is shown in examples (13) and (14) where a noun and a non-finite verb head subject relative clauses respectively, triggering agreement on their targets.

(13) A relative clause headed by a noun
ú-bil wawu wa-bboñ-i me u-let
CLu-sarong(V.PL) V.PL.DEF V.PL.REL-fold-PASS SUBORD V.PL-not.be
'The sarongs that have been folded are missing.'

(14) A relative clause headed by a non-finite verb
u-kkoŋ wawu wa-mmeŋ me u-ttog-e
CLu-cry(V.PL) V.PL.DEF V.PL.REL-be.much SUBORD V.PL-be.sufficient-CPL
'This constant crying is enough (lit: the crying that is much is enough)'

Complement of prepositions. Non-finite verbs also occur as complements of prepositions just like prototypical nouns. In example (15) for instance, the polysemous preposition *ni* 'in/at/on/with/and. . .' precedes a location noun, whereas in example (16), it is part of a periphrastic progressive aspect expression, and precedes the non-finite verb *ja-bbut* 'to fish/fishing with a fishing rod'. The use of prepositions like *ni* 'in/at/on/with/and. . .' with non-finite verbs is a common grammaticalisation process in African languages described in Heine et al. (1991). Heine et al. (1991: 153) argue that in over one hundred African languages "a construction 'X is at/in/on Y' has been reinterpreted as meaning 'X is doing Y', [and has] developed into progressive and similar aspects".

(15) The preposition *ni* 'in/at/on/with/and. . .' takes a noun as a complement.
Richard umu ni fí-ttit
Richard(I.SG.) I.SG.COP PREP CLfu-river(III.SG)
'Richard is at the river.'

(16) The preposition *ni* takes a non-finite verb as a complement.
t-o goom-en-e ni bú-ramor e-llu
VIII-PRO I.3PL.be-INACT-CPL PREP CLbu-fight.over CLe-meat(II.SG)
'They were there, fighting over meat.' (ss20060325_ab)

Pronominalisation. Eegimaa non-finite verbs can also be pronominalised like prototypical nouns. This is illustrated in (17), where the resumptive pronoun *yo* shows the same agreement feature values (Gender II, singular) as its antecedent NP *e-ruçulo* 'yell/yelling.

(17) Pronominalisation of a non-finite verb
e-ruçulo youyu, wóli jú-ju-ut y-o
CLe-yell(II.SG) II.SG.DEM 1PL.EXCL 1PL.EXCL-be.able-NEG II.SG-PRO
'Lit: This yelling, we cannot do it.'

Combination with the connective ala 'of'. Like prototypical nouns (see (19)) non-finite verbs can, as exemplified in (18), also function as heads of possessive phrases and combine with the connective *CL-ala* (or it allomorphs *CL-al* or *CL-aa*).

(18) A noun in a possessive NP with the connective *CL-ala/ CL-al/ CL-aa*
u-kkoŋ wawu wal a-ññil-aw ú-li-om
CLu-cry(V.PL) V.PL.DEF V.PL.CON CLa-child-I.SG.DEF V.PL-wake-1SG.OBJ
'The crying of the child was what woke me up.'

(19) A non-finite verb in a possessive NP with the connective *CL-ala/-al*

u-ssin	wawu	wal	é-be	yayu
CLu-horn(V.PL)	V.PL.DEF	V.PL.CON	CLa-COW(II.SG)	II.SG.DEF

'The horns of the cow.'

Coordination. Eegimaa non-finite verbs are coordinated in the same way as NPs using the semantically generic preposition *ni* 'in/at/on/with/and. . .' which functions in this context as a coordinator. This is illustrated in (20) and (21). Note that finite verbs cannot be coordinated with the preposition *ni*.

(20) Coordination of two nouns with the preposition *ni*

e-joba	ni	e-ssiho	si-jamor-ut
CLe-dog(II.SG)	and	CL3-cat(II.SG)	CLsu-get.along.NEG

'Dogs and cats don't get along.'

(21) Coordination of two non-finite verbs with the preposition *ni*

fi-tiñ	ni	gá-mori	si-jaor-ut
CLfu-eat(IV.SG)	and	CLga-sleep(V.SG)	CLsu-walk.together.NEG

'Eating and sleeping are not compatible.'

Negation. Finally, Eegimaa non-finite verbs can be negated like NPs, using the negative copula '*let/leti*'. Examples (22) and (23) show that the proper name Jayuhumbe and the non-finite verb *fi-tiñ* 'to eat/eating' are negated the same way using the NP negation strategy.

(22) Negation of a proper name with the negative copula 'let/leti'

Dóuru	leti	Jayuhumbe
That	not.be	Jayuhumbe(I.SG)

'That is not Jayuhumbe.'

(23) Negation of a non-finite verb with the negative copula 'let/leti'

Dóuru	leti	fi-tiñ,	é-mer	y-om
That	not.be	CLfu-eat,	CLe-swallow	II.SG-be

'That is not eating, it's swallowing.'

4.3.1.3 Complementation

In this section I investigate the syntactic distribution of non-finite verbs following different kinds of Complement-Taking Predicates (CTPs). CTPs can be auxiliaries [or] control predicates which are compatible with non-finite complement clauses. Eegimaa CTPs are classified here into several general semantic catego-

ries, focusing on those that select non-finite clausal complements. Sentence-like complement clauses are not examined here simply because they are not directly relevant to the investigation of the categorisation of non-finite verbs in Eegimaa. Table 15 presents the major semantic classes of CTPs which take non-finite verbs in Eegimaa, mainly based on Noonan's (2007) classification, and also Givón's (1980; 2001). Verbs are listed in the table only based on their ability to take non-finite complements. The proposed classification is not meant to be an examination of the lexical semantics of individual verbs in the table. Rather, it is an attempt to show the general classes into which they fall in their uses as CTPs.

Table 15: The main classes of complement taking predicates in Eegimaa.

CTP Class	Examples
Phasal inceptive (inchoative)	*e-kkumasi* 'begin', *e-kke* 'go', *e-ilo* 'stand', *e-alo* 'descend/start', *é-pur* 'go out to', *e-jju* 'begin to'.
Phasal continuative (durative)	*umu ni* 'be doing', *e-em ni* 'be doing', *e-roŋ ni* 'be still doing', *é-ni ni* 'be (located at) doing', *e-akken ni* 'endeavour to'.
Phasal terminative (completive)	*e-ban* 'finish', *e-hat* 'stop'.
Desiderative	*e-maŋ* 'want, like', *e-ñum* 'like/AUX', *e-lat* 'refuse', *e-pinor* 'think, intend', *e-sohola* 'need', *e-somben* 'be eager, *e-pare* 'prepare', *e-ttah (ni)* 'tend to'.
Modality	*éju* 'be able'.
Perception, Cognition and Utterance	*e-juh ni* 'see', *e-un ni* 'hear', *e-mind ni* 'catch by surprise'. *e-ttoh ni* 'find', *e-lligen* 'learn/teach', *e-ffas ni* 'be known to', *e-kkañen* 'dare', *e-osen* 'remember to', *e-llih* 'try', *é-jumor* 'forget to', *é-kkanum* 'be careful of/avoid', *é-holi* 'be afraid to'.
Negative	*e-let ni* 'not be doing'
Evaluative	*é-ari* 'be good', *é-ssum* 'be easy to', *e-jjon* 'be good/easy to', *e-ttoh* 'be worth/enough to', *é-ttañi* 'be difficult to'.
Manipulative	*é-fir* 'deprive', *é-firen* 'forbid', *e-fforse* 'force', *e-ramben* 'help'.

Within the semantic classes presented in Table 15, we can distinguish CTPs which take the semantically general preposition *ni* 'in, at, on, with, and. . .' and which always select a non-finite clausal complement, as illustrated in (24), and those which are incompatible with prepositions, like *-maŋ* 'want' in (25).

(24) A CTP combining with the preposition *ni*

Sífenembo	a-jug-ol	ni	e-jow
Sífenembo(I.SG)	I.3SG-see-3SG.OBJ	PREP	CLe-walk

'Sífenembo saw him walking.' (ss2006_uffuluŋ)

(25) A CTP incompatible with the preposition *ni*
Sífenembo a-maŋ-ut (*ni) e-jow
Sífenembo(I.SG) I.3SG-want-NEG (PREP) CLe-walk
'Sífenembo does not want to walk/go.'

In section 4.3.1.1, I showed that non-finite verbs which head subordinate complement clauses can be compatible with different noun class prefixes. It is worth noting, however, that the choice of such prefixes is not dictated by CTPs. The same CTP can select non-finite verbal complements having different noun class prefixes; compare (25) and (26), while different CTPs can also select non-finite verbal complements with the same prefix as can be seen by comparing in (24) and (25).

(26) The CTP 'want' selects a non-finite verb with the prefix *ma-*
Sífenembo a-maŋ-ut ma-rem
Sífenembo(I.SG) I.3SG-want-NEG CLma-drink
'Sífenembo does not want to drink.'

In the next section I discuss the different contexts in which non-finite verbs can be found. I begin with a discussion of phasal/aspectual CTPs presented in Table 15.

4.3.1.4 Phasal predicates

One of the semantic classes of the Eegimaa CTPs is the class of phasal or aspectual predicates, defined following Noonan (2007: 139) as predicates which "refer to the phase of an act or state". This category of CTPs includes three further subcategories of verbs, which refer to the inception, continuation or termination of an event as exemplified in (27), (28) and (29) respectively. The roots of the CTPs are highlighted in boldface in the examples below.

(27) Inceptive CTPs with the verb 'begin'
Appu n-a-**kkumasi**-e ma-rem bu-nuh
Appu(I.SG) REAL-I.3SG-**begin**-CPL CLma-drink CLbu-palm.wine(III.SG)
babu
III.SG.DEF
'Appu has begun drinking the palm wine.'

(28) Continuative CTPs with the verb 'remain'
Firiso n-a-**roŋ** ni ga-vva
Firiso(I.SG) REAL-I.3SG-**remain** PREP CLga-tap.palm.wine
'Firiso is still tapping palm wine.'

(29) Terminative CTPs with the verb 'stop'
Appu n-a-**hal**-e ja-ssaw si-tahalla
Appu(I.SG) REAL-I.3SG-**stop**-CPL CLja-hunt CLsu-gazelle(II.PL)
'Appu has stopped hunting gazelles.' (ss20140404_AmT)

As can be seen in these examples, the complements of the phasal aspectual CTPs occur in post-verbal position as is expected of O arguments in the Eegimaa basic word order. The verbs of the complement clause appear in a nominalised/non-finite form and cannot take verbal inflection markers like aspect and morphological agreement marking. In all these examples, the subject of the complement clause is coreferential with that of the main clause and remains unexpressed.

4.3.1.5 Desiderative predicates

A second category of CTPs is that of desiderative verbs which, as the name suggests, express a desire for a situation to materialise (Noonan 2007: 132). Noonan distinguishes three semantic sub-classes of desiderative, namely the hope-class, the wish-class and the want-class. Eegimaa does not make a lexical distinction between these different classes of desiderative predicates. The lexical root *-maŋ* 'want' in (30) and the auxiliary *-ñum* in (32) exemplify the class of desiderative verbs. The verb *-maŋ* 'want' can take a non-finite verb in its dependent complement clause when its omitted subject is coreferential with that of the matrix clause as in (30). It can also take a finite verb, as in example (31) where the subject can either be co-referential with that of the matrix clause, or it can be the same as the omitted object of the matrix clause (between brackets in (31)).

(30) The desiderative verb 'want' takes a non-finite verb
Appu a-maŋ-ut e-lob
Appu(I.SG) I.3SG-want-NEG CLe-speak
'Appu does not want to speak.'

(31) The desiderative verb 'want' takes a finite verb
Appu a-maŋ-ut (Bábo) a-lob
Appu(I.SG) I.3SG-want-NEG (Bábo) I.SG-speak
'Appu does not want (Bábo) to speak.'

As for the verb *-ñum* 'want/will' it is only compatible with a complement having a non-finite verb, as shown in (32), and the ungrammaticality of example (33), where the verb of the subordinate clause is finite. Note that the CTP 'will' in (32) is

a pure auxiliary whose use as a single predicate in a simple clause with the sense of 'love/want' is obsolete.

(32) The desiderative verb 'will' takes a non-finite verb
Appu a-ñum-ut e-lob
Appu(I.SG) I.3SG-will-NEG CLe-speak
'Appu will not speak.'

(33) Ungrammatical use of the desiderative verb 'will' with a finite verb
*Appu a-ñum-ut a-lob
Appu(I.SG) I.3SG-will-NEG I.SG-speak
'Appu will not speak.'

4.3.1.6 Modal complement-taking predicates

Modal CTPs are verbs which express epistemic (certainty and possibility) and deontic (permission and obligation) modalities (Noonan 2007: 137–139). Most Eegimaa modal CTPs require a complement clause with a finite verb. The modal CTP *é-ju* 'be able' is the only one found with a non-finite complement clause, but only when it conveys the meaning of ability. If it conveys the meaning of permission, it takes a finite clause as a complement. This contrast is captured in examples below, where the complement clause in (34) is a non-finite verb, whereas the one in (35) is a finite verb which takes a subject marker, and shows agreement in gender, person and number with the subject NP. In both these examples the subject of the complement clause is coreferential with that of the matrix clause.

(34) The modal CTP expresses ability and takes a non-finite verb
a-ññil-aw n-á-ju-e ga-robo?
CLa-child-I.SG.DEF REAL-I.3SG-can-CPL CLga-sit
'Is the child able to sit?'

(35) The modal CTP expresses permission and takes a finite verb
a-ññil-aw n-á-ju-e a-robo
CLa-child-I.SG.DEF REAL-I.3SG-can-CPL I.SG-sit
'The child can (is allowed to) sit.'

4.3.1.7 Perception, Cognition and Utterance CTPs

The terms Perception, Cognition or Utterance (PCU) are taken from Givón (2001: 153) to refer to a broad category of CTPs which have an experiencer or agent subject who perceives, cognises a state of affairs or utters a proposition. PCU predicates

generally take sentence-like complement clauses in Eegimaa. Those that take non-finite complement clauses include Noonan's (2007) positive and negative achievement verbs. The former "refer to the manner, or realisation of achievement [whereas the latter] refer to the manner of, or reason for the lack of achievement in the complement predication" (Noonan 2007: 139). Examples of achievement verbs include *e-osen* 'remember to' (positive) and *é-jumor* 'forget to' (negative) which are used for illustration in (36) and (37) respectively.

(36) A positive PCU achievement predicate as a CTP
Imbi u-osen e-vvoh Ámbu
PERM 2SG-remember CLe-call Ámbu
'Do remember to call Ámbu.'

(37) A negative PCU achievement predicate as a CTP
Jambi ú-jumor e-vvoh Ámbu
PROH 2SG-forget CLe-call Ámbu
'Don't forget to call Ámbu.'

The PCU category of predicates also includes verbs of cognition like *e-pinor* 'think' illustrated in (38), which refer to mental processes just like some of Noonan's achievement verbs but cannot easily be classified as such. The difficulty in finding clear criteria that distinguish cognition verbs such as *e-pinor* 'think' from those that Noonan includes in the class of achievement predicates is what motivates their classification here into the major category of PCUs. As with the examples of achievement verbs above, cognition verbs like *e-pinor* 'think' take a complement clause whose implicit subject is coreferential with that of their main clause.

(38) A PCU cognitive predicate as a CTP
[ø]-áine-aw n-a-pinor-e e-nnom fí-jjin
[Ø]-man-I.SG.DEF REAL-I.3SG-think-CPL CLe-buy CLfu-bull(IV.SG)
'The man intends to buy a bull.'

PCU verbs also include Noonan's (2007: 31) predicates of fearing such as be afraid, which "express an attitude of fear or concern that the complement proposition will be or has been realised." This is illustrated in Eegimaa with the verb *é-holi* 'to fear/be afraid to' in (39). Here again, the unexpressed subject of the complement clause is coreferential with that of the matrix clause.

(39) A PCU predicate of fearing as a CTP
Amisa n-á-holi-holi e-kke ni
Amisa(I.SG) REAL-I.3SG-be.afraid-REDUP CLE-go PREP
si-ppay-ol
CLsu-father(I.PL)-3SG.OBJ
'Amisa is afraid to go to his mother's relatives.' (ss2004Oct13_Clar)

Perception CTPs are another type of predicates included in the PCU category of verbs. They are defined following Noonan as predicates which express a sensory or mental mode of perception of an event (Noonan 2007: 142–144). Eegimaa verbs of perception which take non-finite complement verbs include *e-juh* 'see' illustrated in (40). With perception CTPs, the subject of the complement clause is not co-referential with that of the matrix clause. Rather, it refers to the same entity as the object of the matrix clause.

(40) A PCU perception predicate as a CTP
Sífenembo a-jug-ol ni e-jow
Sífenembo(I.SG) I.3SG-see-3SG.OBJ PREP CLe-walk
'Sífenembo saw him walking.' (ss2005Dec14_Dembo)

Finally, the last subgroup of PCU is that of utterance predicates which generally take finite complement verbs in Eegimaa. However, *e-lob* 'speak/talk' is a rare case of an utterance predicate that can take a non-finite complement, but only when it is used to 'express the intention of doing X', as in example (41).

(41) An utterance PCU predicate as a CTP
[ø]-áine-aw n-a-lob-e e-nnom fí-jjin
[Ø]-man-I.SG.DEF REAL-I.3SG-speak-CPL CLe-buy CLfu-bull(IV.SG)
'The man has talked about buying a bull.'

When an utterance predicate like *e-lob* 'speak' takes a non-finite complement verb, the unexpressed subject of the complement clause is co-referential with that of the matrix clause. In example (41) 'the man' is the one who is expected to buy the bull that he talked about.

4.3.1.8 Negative predicates

There is one CTP *e-let* 'not be', which is classified here as a negative predicate (Noonan 2007: 144). It combines with the preposition *ni* 'in, on, at, with. . .' to negate an activity. In this context it requires a non-finite verb in its complement

clause as can be seen in example (42). With the negative CTP *e-let* 'not be', the unexpressed subject of the complement clause is the same as that of the matrix clause. The negative CTP *e-let* 'not be' negates ongoing events, which suggests that it may also be classified as a negative phasal predicate.

(42) The negative predicate e-let 'not be' as a CTP

Firiso	a-let	ni	ga-vva
Firiso(I.SG)	I.3SG-not.be	PREP	CLga-tap.palm.wine

'Firisso is not tapping palm wine.'

4.3.1.9 Evaluative Predicates

Another group of Eegimaa CTPs which take non-finite verbs in their complement clauses is that of evaluative predicates. This term is borrowed from Givón (2001: 158) to designate a category of intransitive stative CTPs which describe a situation in which the ease or difficulty to influence the materialisation of a state of affairs is assessed. Evaluative predicates are illustrated in (43) and (44). With evaluative CTPs the unexpressed subject of the complement clause is not co-referential with that of the matrix clause. Here, it is the object of the complement clause which is controlled by the subject of the matrix clause. These examples illustrate a phenomenon commonly known as "object raising" or "tough-movement".

(43) An evaluative predicate as a CTP

e-llu	yayu	é-ttog-ut	bú-gabor
CLe-meat(II.SG)	II.SG.DEF	II.SG-be.sufficient-NEG	CLbu-share

'The meat is not enough to share.' (ss2005Dec14_Dembo)

(44) An evaluative predicate as a CTP

ñi-hin	ñañu	ñí-ttañi-ttañi	bá-fosul!
CLñu-plot(VII.SG)	VII.SG.DEF	VII.SG-be.difficult-REDUP	CLba-weed

'The plot of rice field is difficult to weed.'

4.3.1.10 Manipulative predicates

Prototypical manipulative CTPs have causative properties and "typically encode situations where the agent attempts to manipulate [an] affectee into performing some action or assuming some state" (Noonan 2007: 136). Manipulatives include expressions of command, request and exhortation. In Eegimaa, CTPs expressing command generally take complements with finite clauses, but they can also take complements with non-finite clauses, as illustrated in (45). With manipulative verbs like 'force' (borrowed from French), the missing subject of the complement

clause is not controlled by the subject of the matrix clause. Rather, it must be interpreted as referring to the object of the matrix clause. The native Eegimaa causal verb *e-kkan* 'make/do' takes a finite clause as a complement in this context.

(45) A manipulative verb as a CTP
Fuppu nahi a-forse-oli fi-tiñ
Fuppu(I.SG) HAB I.SG-force-1PL.EXCL CLfu-eat
'It's Fuppu who forces us to eat.'

4.3.1.11 Elision of CTPs

In Eegimaa, non-finite verbs can occur in constructions without CTPs, and where they are juxtaposed with nominals. Weiss (1939: 430) was the first to report this phenomenon in Jóola Foñi even though he does not distinguish between different elided elements as I do here. Weiss that in Jóola Foñi the "infinitive" is used instead of the indicative to express an observation, a warning or a promise. The juxtaposition of non-finite verbs with nominals has also been reported in Baïnounk Gubëeher and are called "non-embedded infinitives" used to express "present progressive and commenting what someone is doing or is about to do" (Cobbinah 2013: 403–404). Here, I argue that in Eegimaa and other Jóola languages (e.g. Jóola Foñi and Kujireray) for which I have access to data, the juxtaposition of non-finite verbs with nominals is the result of the elision of CTPs in declarative, interrogative and exclamative clauses. Example (47) illustrates a case of elision of CTP with the non-finite verb *bú-ot* 'to go home/going home' being juxtaposed to a pronoun. The elided CTP can be any of the CTPs discussed above, as long as there are no selectional restrictions between the CTP and the non-finite verb it takes. For example, the elided desiderative CTP *-maŋ* 'want' in (46) can be replaced by a continuative one like *-kke* 'going' to express an intention. The elided CTPs in the examples below are put between brackets.

(46) A declarative clause with an elided desiderative CTP
wóli (ji-maŋ-e) bú-ot
1PL.EXCL (1PL.EXCL-want-CPL) CLbu-go.home
'We want to go home.'

In declarative clauses like (46) and interrogative clauses like (47), the elision of the CTP occurs in expressions of ongoing events, or planned events or those that are about to happen in the imminent future. This includes Weiss's expressions of "observation" and "promise".

(47) An interrogative clause with an elided progressive CTP
buru (ubugi ni) e-jow?
You(PL) (COP.PL PREP) CLe-go
'Are you going?'

In exclamative clauses as in (48) the elision of CTPs takes place in the context of the description of a habit, a talent or some other positive or negative characteristics of an individual or an entity. This is close to what Weiss (1939: 430) describes as "observation".

(48) An exclamative declarative clause with an elided desiderative CTP
aw (min u-maŋ me) fi-tiñ!
you (PART 2SG-want SUBORD) CLfu-eat
'You (love) eating (so much)!'

To summarise the discussion of nominal properties of non-finite verbs in the sections above, the nominal characteristics of Eegimaa non-finite forms include taking noun class prefixes and having the distributional properties of NPs. They show internal NP syntax by combining with nominal modifiers like definite determiners, demonstratives and adjectives and by functioning as heads of relative clauses. They also show external NP syntax by exhibiting the distributional properties of NPs. In addition to these nominal properties, Eegimaa non-finite verbs also exhibit the internal structure of VPs by having arguments structure and by being modified by adverbs as will be shown in the next section.

4.3.2 Verbal properties of Eegimaa non-finites

In addition to their nominal properties discussed in 4.3.1, Eegimaa non-finite verbs also have morphosyntactic properties of verbs.

Taking objects. Similar to finite verbs and also cross-linguistic infinitives and gerunds, Eegimaa non-finite verbs can take overt object NPs. As shown in the previous section, their subjects are controlled by the matrix clause and cannot be expressed overtly. In (49) the subject of the non-finite verb in the subordinate clause *ja-imen* 'hunt domestic animals' is coreferential with that of the matrix clause and remains unexpressed.

(49) The non-finite verb ja-imen takes a direct object

ban	gu-kke	ja-imen	si-haj	sasu
IMM.FUT	I.3PL-go	CLja-hunt	CLsu-domestic.animal(II.PL)	II.PL.DEF

'They are going to hunt the domestic animals.' (ss2015feb23_OVC-ja)

When non-finite verbs combine with a direct object, they cannot be separated from the latter by a determiner, as shown by the ungrammaticality of example (52). Taking a definite determiner always indicates that the non-finite form is being used in nominal context. In its verbal function, a non-finite verb cannot take a determiner, which would mean that it is functioning as a noun, and an object at the same time, in the same clause, which would indicate that it is functioning as a verb. In other words, similar to the English gerunds (Kroeger K. 2004: 45) nominal and verbal properties are never mixed within the same phrase. The determiner must follow the object, and the agreement with either the non-finite verb object as in (51), or its object in example (50), indicates which element is determined.

(50) The definite determiner follows the object and shows agreement with it

ma-rem	ga-jjo	gagu
CLma-drink	CLga-mead(V.SG)	V.SG.DEF

'Drinking the mead.'

(51) The determiner follows the object and shows agreement with the non-finite verb

ma-rem	ga-jjo	mamu
CLma-drink(VI.PL)	CLga-mead(V.SG)	VI.PL.DEF

'The drinking of the mead.'

(52) Ungrammatical occurrence of the definite determiner preceding the object

*ma-rem	mamu	ga-jjo
CLma-drink(VI.PL)	VI.PL.DEF	CLga-mead(V.SG)

'The drinking of the mead.'

Taking pronominalised objects. The direct object NPs in non-finite clauses can be pronominalised and affixed to either the CTP as, in example (53), or to the non-finite verb that heads the dependent clause as shown in (54). The difference in meaning between these two constructions is unclear and requires further research.

(53) The pronominalised object attaches to the CTP 'go'
ban gu-kka-ol e-ŋar
IMM.FUT I.3PL-go-3SG.OBJ CLe-take
'They are going to take him.' (ss2015feb23_OVC-ja)

(54) The pronominalised object attaches to the non-finite verb 'take'
ban gu-kke e-ŋar-ol
IMM.FUT I.3PL-go CLe-take-3SG.OBJ
'They are going to take him.' (ss2015feb23_OVC-ja)

Modification by adverbs. Eegimaa non-finite verbs can also be modified by adverbs, just like finite verbs. This is exemplified in (55) and (56).[32]

(55) The non-finite verb 'fish with fence' is modified by the adverb *mámah* 'very much/a lot'
Ámbuyi n-á-ju-e ja-ppaŋ mámah
Ámbuyi(I.SG) REAL-I.3SG-can-CPL CLja-fish.fence very.much
'lit: Ámbuyi knows how to fish with a fish fence very well.'

(56) The non-finite 'walk' is modified by the adverb 'far'
i-ñum-ut e-jow huli
1SG-AUX-NEG CLe-walk long/far
'I will not go far.'

Occurring in purposive clauses. Like prototypical infinitives, Eegimaa non-finite verbs follow the allative preposition *bi* 'to/for/in order to' in purposive clauses. Haspelmath (1989: 304) argues that "infinitives arise when non-finite verb forms are grammaticalised in a purposive function". Whether Eegimaa non-finite verbs are best classified as infinitives will be discussed in Section 4.5.2. Example (57) illustrates the occurrence of an Eegimaa non-finite verb with a purposive clause.

32 The adverb *mámah* 'very much' in example (55) is derived through a combination of class prefix *m-* (from) the *ju-/mu-* morphological class and the adjectival root *-amah* 'big'. As for the adverb *huli* 'far' in (56), it is derived from a productive process whereby bare roots of stative/property concept verbs can be used as adverbs.

(57) The non-finite verb 'beat up' follows the allative preposition *bi* 'to/in order/until'

Nahi	a-agen	e-gol	bi	gú-teh	bug-an
HAB	I.3SG-hold	CLe-stick(II.SG)	to	CLgu-beat.up	CLbug-person(I.PL)

'S/he would carry a stick with her/him to beat people up.' (ss2009Feb03_Eij)

Combining with voice the suffix *-i*. Eegimaa non-finite verbs can combine with the voice suffix *-i* in valence decreasing constructions. In example (58) for instance, the non-finite verb *e-op* 'tie horns' occurs with the passive suffix *-i* and contrasts with example (59), where it occurs in the active voice.

(58) Combination of a non-finite verb with the passive suffix *-i*

sí-be	nahi	sí-bboli	e-op-i
CLsu-cow(II.PL)	HAB	II.PL-be.habitually	CLe-tie.horn-PASS

'It is cows that are usually tied on their horns.'

(59) Occurrence with the non-finite verb 'tie horn' in the active voice

nahi	gú-bboli-bboli	e-op	sí-be
HAB	II.PL-do.habitually-REDUP	CLe-tie.horn	CLsu-cow(II.PL)

'They usually tie cows on their horns.'

Retention of valence. Non-finite verbs also take other valence decreasing expressions as shown by the combination of the reciprocal suffix *-or* with the root *-ram* in example (61) which can be compared with example (60).

(60) Non-finite verb taking an object

e-ram	waf
CLe-snatch	CLw.thing(V.PL)

'To snatch something.'

(61) Combination of the reciprocal suffix with a non-finite verb

e-ram-or	waf
CLe-snatch-RECIP	CLw.thing(V.PL)

'To fight over something.'

Combination with the clausal negation suffix. We have seen in Section 4.3.1.8 that Eegimaa non-finite verbs can be negated using the negative copula *let*/*leti* used for NP negation in equative clauses. The clausal negation suffix *-ut* which combines with finite verbs (cf. (62)) can also attach to non-finite clauses to negate action/state nominalisations meaning 'the fact that X does not happen/the absence of

quality x' as, in example (64). In this context, however, the verbal stem generally combines with the prefix *ga-*. For example, non-finite verbs which take prefixes, like *e-* like the one in example (63), must take the prefix *ga-* when they combine with the negation suffix *-ut*.

(62) The clausal negation suffix *-ut* on a finite verb
u-ya wawu u-baj-ut mú-hum
CLu-alveolus(V.PL) V.PL.DEF V.PL.have-NEG CLmu-honey(I.PL)
'The alveoli do not have honey.' (ss2009Jun26_Gáhomul)

(63) A non-finite verb taking the prefix *e-*
n-a-faŋ-i e-ffas waf
REAL-I.SG-SURPASS-2SG.OBJ CLe-know CLw.thing(V.PL)
'Lit: s/he know things more than you.' (s/he is more knowledgeable than you.)

(64) The clausal negation suffix *-ut* on a non-finite verb
ga-ffas-ut-i waf
CLga-know-NEG-2SG.POSS CLw.thing(V.PL)
'Lit: Your not knowing anything' (the fact that you do not know anything.)

Occurrence in comparative construction. Eegimaa non-finite verbs are also found in comparative clauses where the properties or abilities they denote are compared between the subject and the standard. As shown in example (65), the Eegimaa comparatives are formed in bi-clausal sentences where the comparative marker,the verb *e-faŋ* 'surpass', occurs in its finite form in the main clause, whereas the subordinate complement clause takes a non-finite verb.

(65) The non-finite verb 'play football' occurs in a comparative construction
Bondal n-a-faŋ-e Jombor ja-baloŋ
Bondal(I.SG) REAL-I.3SG-SURPASS-CPL Jombor CLja-football(VI.SG)
'Bondal is better at playing football than Jombor.'

In summary, Eegimaa non-finite verbs have both nominal and verbal properties. As pointed out above, in a given clause, a non-finite verb functions either as a noun or a verb. But it is never the case that both nominal and verbal characteristics are mixed in the same clause. This reinforces the argument made in this book that, the classification of non-finite verbs is both a kind of nominal and verb classification, since they exhibit both nominal and verbal properties, which are summarised in Table 16.

Table 16: Summary of nominal and verbal properties of Eegimaa non-finite verbs.

Nominal properties	Verbal properties
Can function as arguments	Can take overt object NPs
Can be pronominalised	Can take pronominalised objects
Can take nominal modifiers	Can be modified by adverbs
Can occur as complements of prepositions	Can occur in purposive clauses
Can head NPs	Can combine with valence marker
Can combine with the connective *-ala*	Can occur in comparative clauses
Can take NP negation	Can take clausal negation suffix *-ut*

4.4 The overt classification of non-finite verb forms

4.4.1 Non-finite verbs in different classes

I now come back to the argument that non-finite verbs are classified into overt verb classes. Recall that these non-finite verb forms must take a noun class prefix and can never occur as bare stems. The examples provided in previous sections include non-finite verbs which take several different noun class prefixes. This shows that these non-finite verbs belong to different overt morphological classes. Three more examples are given in (66) to (68) using prefixes *ma-*, *ja-* and *u-* to illustrate this point, but more examples of prefixes functioning as verb class markers can be seen throughout this chapter.

(66) A non-finite verb taking the prefix *ma-*
Jayuhumbe na-hal-e ma-rem biñu
Jayuhumbe(I.SG) REAL.I.3SG-stop-CPL CLma-drink [ø]red.wine(II.SG)
'Jayuhumbe has stopped drinking red wine.'

(67) A non-finite verb taking the prefix *ja-*
Jayuhumbe na-hal-e ja-mbal
Jayuhumbe(I.SG) REAL.I.3SG-stop-CPL CLja-fish.net
'Jayuhumbe has stopped fishing with a net.'

(68) A non-finite verb taking the prefix *u-*
Jayuhumbe na-hal-e u-kkuŋ
Jayuhumbe(I.SG) REAL.I.3SG-stop-CPL CLu-cry
'Jayuhumbe has stopped crying.'

Eegimaa has 15 non-finite overt verbal classes. These classes and the prefixes used as markers for these classes are presented in Table 17. The number of items assigned to each class differs considerably from one class to another, ranging from four to a few hundred. For example, the class *ju-/ji-* has four members whereas class *e-* has over 500.[33]

Table 17: The Eegimaa non-finite verb classes and their class markers.

Non-finite verbs taking singular prefix			**Non-finite verbs taking plural prefix**		
SG	Examples	Gloss	PL	Examples	Gloss
e-	e-ber	'to laugh/laughing/laughter'	su-/si-	si-ttehumor	'to dither/dithering'
bu-	bu-ñumor	'to woo/wooing'	u-	u-kkoŋ	'to cry/crying'
ba-	ba-vvu	'to sweep/sweeping'	gu-	gú-teh	'to beat/beating up'
fu-	fú-rosor	'to play/playing/game'	mu-	mu-jah	'to be clever/ cleverness'
fa-	fá-ruho	'to daydream/daydreaming'	ma-	ma-rem	'to drink/drinking'
ga-	ga-vven	'to row/rowing'			
ju-	ji-bij	'to lie/lying'			
ja-	ja-ssaw	'to hunt/hunting with gun'			
ñu-	ñu-ssu	'to be/being ashamed/shame'			
ña-	ña-es	'to barter/barter'			

Recall from Chapter II that the class prefixes found on non-finite verbs are also used as noun class markers in the nominal domain. As Table 17 shows (see also example (5)), both singular and plural noun class prefixes from the nominal domain function as non-finite verb class markers. The only class markers that do not participate in non-finite verb classification are the "human class" pair (CL1 *a-* and CL2 *bug-*) and locative class markers (CL 13 *ti-*, 14 *d-* and 15 *n-*).

The use of plural class markers from the nominal domain as non-finite verb markers deserves a brief mention here before I return to this issue in Chapter VI. One of the key claims in this book is that verbal plurality/pluractionality is expressed with certain prefixes, including most plural ones. Note, however, that pluractionality expressions are not restricted to the use of plural prefixes. Collective markers for nouns, like the diminutive collective marker *ba-* (collective for small things) are also used as pluractionality markers, as will be shown in Chapter VI (see also Schultze-Berndt & Sagna 2010; Sagna 2014). Further evidence that Eegimaa

33 I am excluding cases where non-finite verbs take the prefix *e-* as a secondary prefix in cases of prefix alternations as discussed in 0 below.

non-finite verb forms fall into different morphological classes come from the classification of derived non-finite verbs and borrowed verbs from French and Wolof, as discussed in Section 4.4.4.

4.4.2 The classification of Eegimaa non-finite verbs is not phonologically determined

Previous work in Jóola Foñi (Weiss 1939; Kennedy 1964; Sapir 1965) has shown that the noun class markers which combine with a verbal stem to form "infinitives" are to a large extent predictable. Monosyllabic stems generally take the prefix *e-* as with *e-ga* 'to throw', whereas polysyllabic one tend to combine with the prefix *ka-* as in *ka-jijiren* 'to cause disorder' (Sapir 1965: 77). It is important to bear in mind, however, that the classification of Eegimaa non-finite verbs is not phonologically determined. This is illustrated in example (69), where different noun class prefixes are shown with both a monosyllabic and a polysyllabic root.

(69) Combinations between verbal stems and NCPs are phonologically unpredictable in Eegimaa

Monosyllabic stem		Polysyllabic stems	
e-lob	'to speak/speaking/ speech'	e-lolloben	'to monologue/ monologuing'
ga-vven	'to row/rowing'	ga-lollobor	'to discuss/discussing'
ma-rem	'to drink'	má-amulo	'to yawn/yawning'
ba-vvu	'to sweep/sweeping'	ba-teŋen	'to clean dykes/cleaning dykes'
fi-tiñ	'to eat/eating'	fí-tinen	'to accompany/ accompanying'

4.4.3 The classification of derived non-finite verbs

This section takes a look at the grouping of non-finite verbs derived from selected derivational categories including valence changing operations with causatives (Section 4.4.3.1), reciprocals (Section 4.4.3.2) and middle verbs (Section 4.4.3.3). I also include examples illustrating the classification of denominal non-finite verb forms derived with the verbaliser *-et* in Section 4.4.3.4. Finally, the classification of borrowed verbs is discussed in Section 4.4.3.5.

4.4.3.1 Non-finite causative verb classes

Eegimaa has a productive morphological process for deriving causative verbs using the suffix *-en*. Derived causative non-finite verbs take different noun class prefixes and are, as a result, grouped into different morphological classes. The distribution of causative, non-finite verbs into classes is shown in Figure 2 (the graphs in this chapter have been produced in R using the ggplot2 package (Wickham 2016)). Given that prefix alternations are allowed for many non-finite verbs the choice of the primary NCP is based on the following: a) semantic genericity, where NCPs with the most general semantic meaning, that is, those found on verbs having a more context-independent meaning are considered more primary, b) frequency of use.

As can be observed in Figure 2 above, the nominal default class marker ***e-*** found in forms like *e-bañ-en* 'take back (transitive)' is the most frequently used prefix with derived causative non-finite verbs (86%). The other prefixes found with causative derivatives are *ga-* 9%), *ja-* (3%), and *bu-* (1%), exemplified in (70) to (72) respectively, and also noun class prefix *fu-* (1%).

(70) The non-finite verb 'make palm oil' takes noun class prefix *ga-*
Amisa n-a-roŋ ni gá-mmitt-en
Amisa(I.SG) REAL-I.3SG-remain PREP CLga-palm.oil-CAUS
'Amisa is still making palm oil.'

(71) The non-finite verb 'enthrone' take noun class prefix *ja-*
figen gu-kkumasi-e já-vvi-en Ñátato
yesterday I.3PL-begin-CPL CLja-king-CAUS Ñátato
'It's yesterday that they started enthroning Ñátato.'

(72) The non-finite verb 'dry' take the noun class prefix *bú-*
figen gu-kkumasi-e bú-ha-en e-mmano
yesterday I.3PL-begin-CPL CLbu-dry-CAUS CLe-rice
'It's yesterday that they started drying rice (grains).'

4.4.3.2 Non-finite reciprocal verb classes

Similar to causatives, morphologically reciprocal verbs are classified in their non-finite forms, and they take different noun class markers. The distribution into classes for the 74 non-finite verbs taking the suffix *-or* in its reciprocal sense is shown in Figure 3 below.

Examples (73) and (74) illustrate the classification of reciprocal non-finite verbs in different classes using noun class prefixes *ja-* and *bu-*.

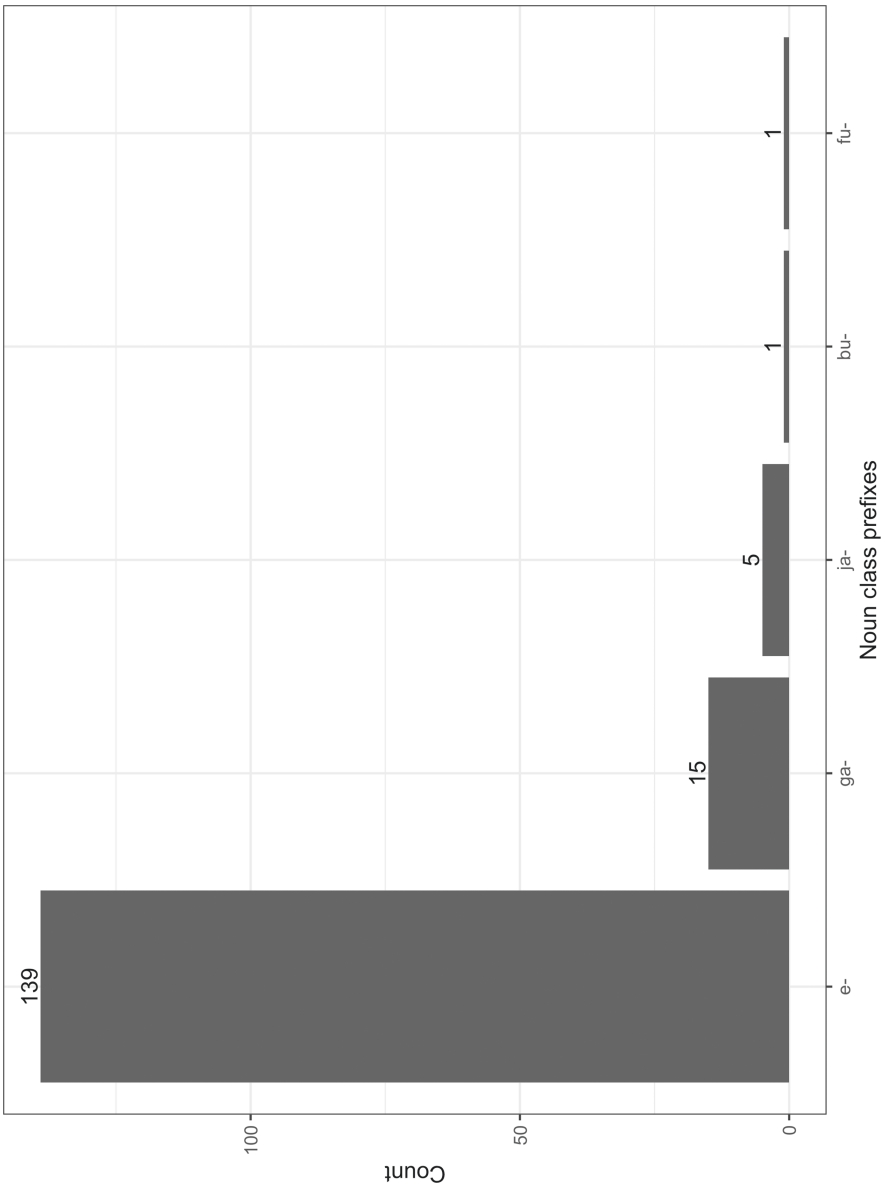

Figure 2: Eegimaa non-finite causative verbs (N = 161).

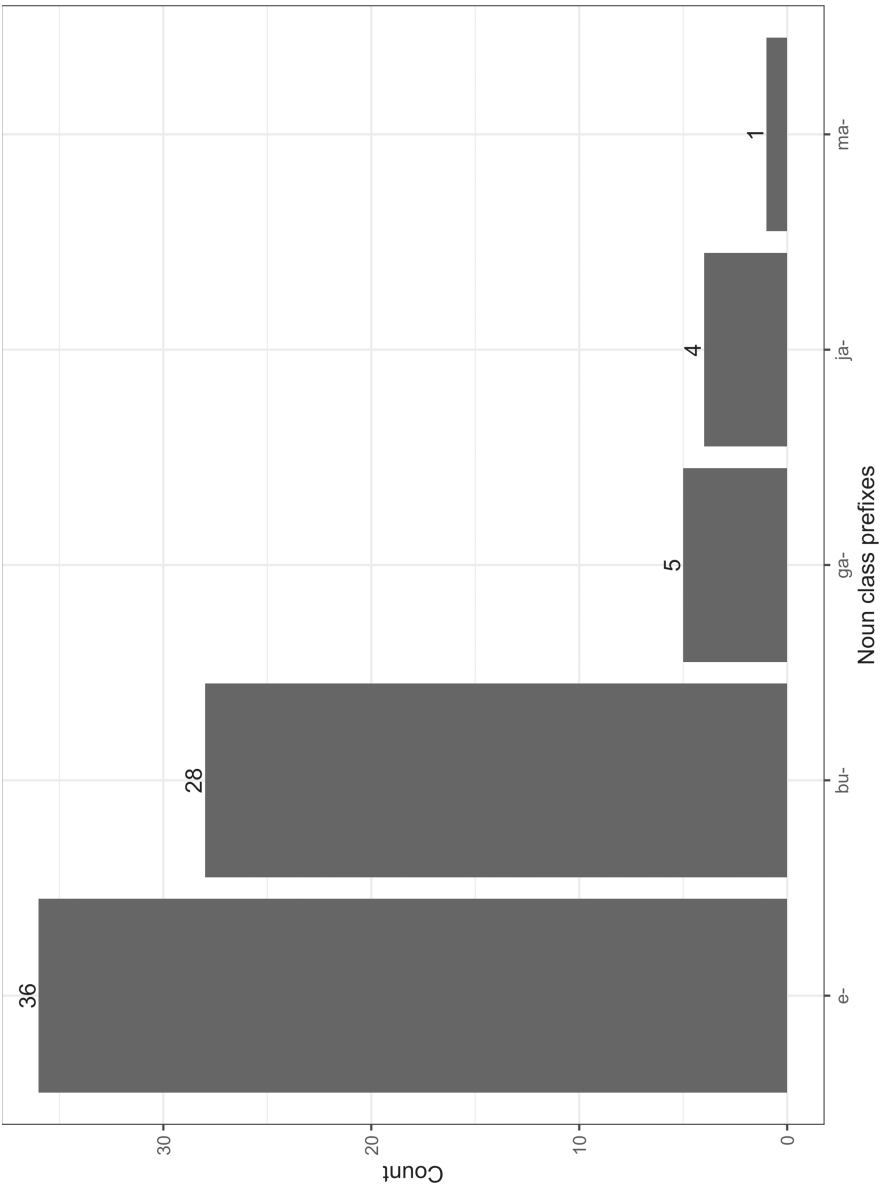

Figure 3: Eegimaa non-finite reciprocal verbs (N = 74).

(73) The reciprocal non-finite verb 'kill each other' takes the prefix *ja-*

u-ttig-a	wawu	gu-hal-e	ja-mug-or
CLu-war-AGT(I.PL/V.PL)	V.PL.DEF	I.3PL-stop-CPL	CLja-kill-RECIP(VI.SG)

'The warriors have stopped killing each other.'

(74) The reciprocal non-finite verb 'singing to each other' takes the prefix *bu-*

w-aare-aw	gu-hal-e	bú-ffoñ-or
CLw-female(I.PL/V.PL)-I.SG.DEF	I.3PL-stop-CPL	CLbu-sing-RECIP(III.SG)

'The women have stopped singing songs to mock each other.'

4.4.3.3 Non-finite middle verb classes

Eegimaa middle verbs are also assigned to several different morphological classes in their non-finite forms. Most non-finite middle verbs take class prefix *e-*. Examples include verbs like *e-jal-o* (CLe-untie-MID) 'to undress', *e-fum-o* (CLe-break-MID) 'break'. The distribution of middle verbs into classes is shown in Figure 3.

Examples (75) and (76) illustrate cases where the middle suffix *-o* attaches to verbal stems which take other noun class markers with prefixes *ga-* and *bu-/bi-* in their non-finite forms.

(75) The non-finite middle verb 'shower' takes the prefix *ga-*

ji-ban-e	ga-uvv-o?
2PL-finish-CPL	CLga-shower-MID

'Have you finished taking a shower?'

(76) The non-finite middle verb 'dress' takes the prefix *bu-*

ji-ban-erut	bi-ssim-o?
2PL-finish-ANTIC	CLbu-dress-MID

'Have you not finished dressing?'

4.4.3.4 Classes of non-finite denominal verbs derived with the verbaliser *-et*

When verbs are derived from nouns with the verbaliser suffix *-et*, they are also assigned to different morphological classes in their non-finite forms. Note, however, that most non-finite verbs which are derived using the verbaliser *-et* take the default class prefix *e-*. They include verbs like *e-fin-et* (CLe-grey.hair-VBLZ) 'have grey hair' and *e-sem-et* (CLe-rust-VBLZ) 'be rusty'. Figure 5 shows the different morphological classes to which non-finite verbs derived with the verbaliser *-et* are assigned.

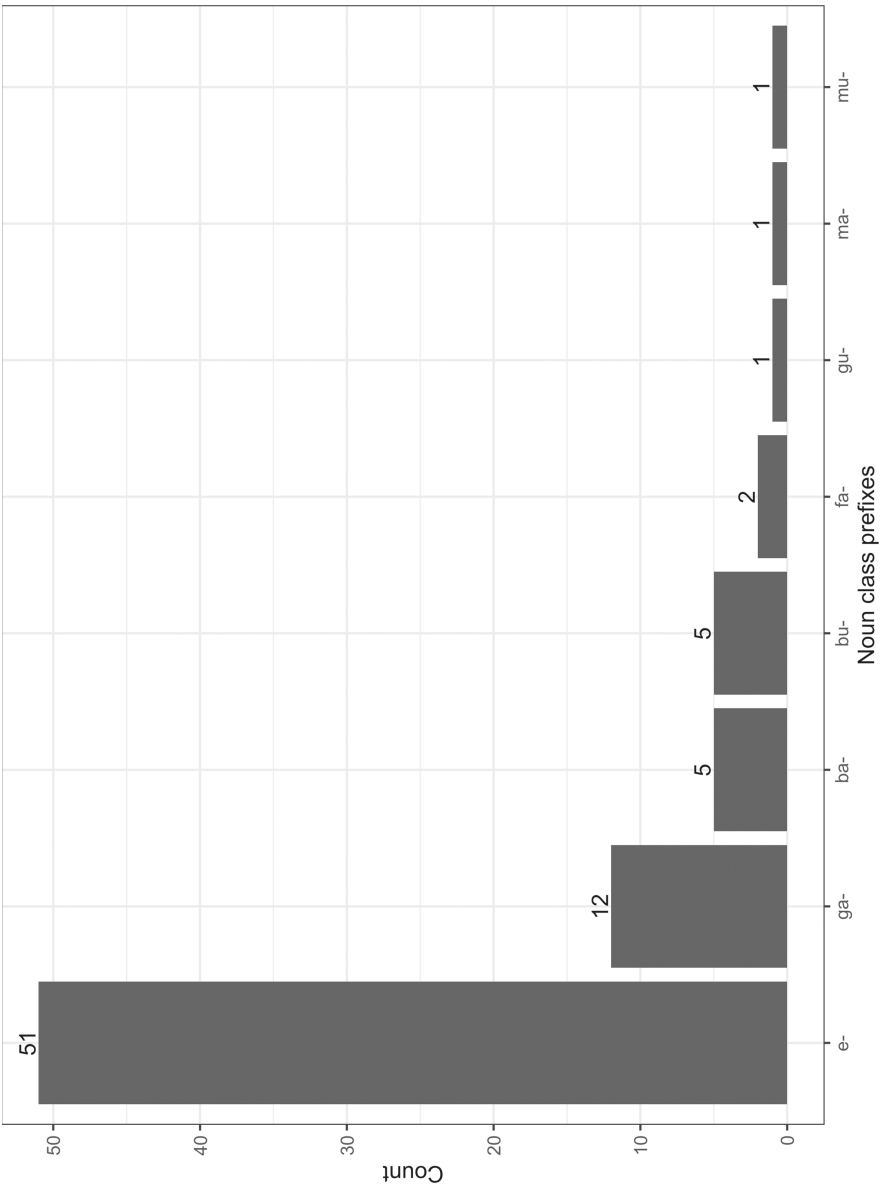

Figure 4: Eegimaa non-finite middle verbs (N = 78).

Non-finite verbs derived by use of the verbaliser *-et* are illustrated in (77) to (79), using noun class markers *ga-* and *bu-* and *fu-*.

(77) The non-finite verb 'pick up mangoes' takes the prefix *ga-*
n-a-kke ga-mangu-et
REAL-I.3SG-remain CLga-mango-VBLZ
'S/he is gone picking up mangoes.'

(78) The non-finite verb 'behave like young woman' takes the prefix *bu-*
n-a-roŋ ni bú-jur-et
REAL-I.3SG-remain PREP CLbu-young.woman-VBLZ
'She still behaves like a young girl.'

(79) The non-finite verb 'behave like European' takes the prefix *fu-*
n-a-roŋ ni fú-lullum-et
REAL-I.3SG-remain PREP CLfu-European-VBLZ
'S/he still behaves like a European.'

Figure 5 shows that, as with all other derivational categories discussed above, NCP *e-* is the most frequently used prefix with non-finite verbs derived from the verbaliser *-et*. The figure also shows the other prefixes used in the derivation of verbs, using the verbaliser *-et*, vary in their frequency.

4.4.3.5 Borrowed verbs and their classification

In the nominal domain, many loanwords take noun class prefixes from different morphological classes partly based on phonological and semantic criteria (Sagna 2012). But the majority of loanwords are not classified on phonology or semantic bases. Rather, they are assigned to the default class and take the prefix *e-*, traditionally called the default noun class marker. In the verbal domain, however, the majority of loan verbs take the prefix *ga-*, as can be seen in Figure 6 below.

Example (80) illustrates the use of the prefix *ga-* on borrowed non-finite verbs. A few other borrowed verbs take other prefixes like *ja-* and *bu-*, as illustrated in (81) and (82). The nominal default prefix *e-* can also be used with some loan verbs in their non-finite forms, but this is very rare. The fact that most borrowed verbs take the prefix *ga-* suggests that the default morphological class with verbs is different from the nominal one, marked by NCP *e-*.

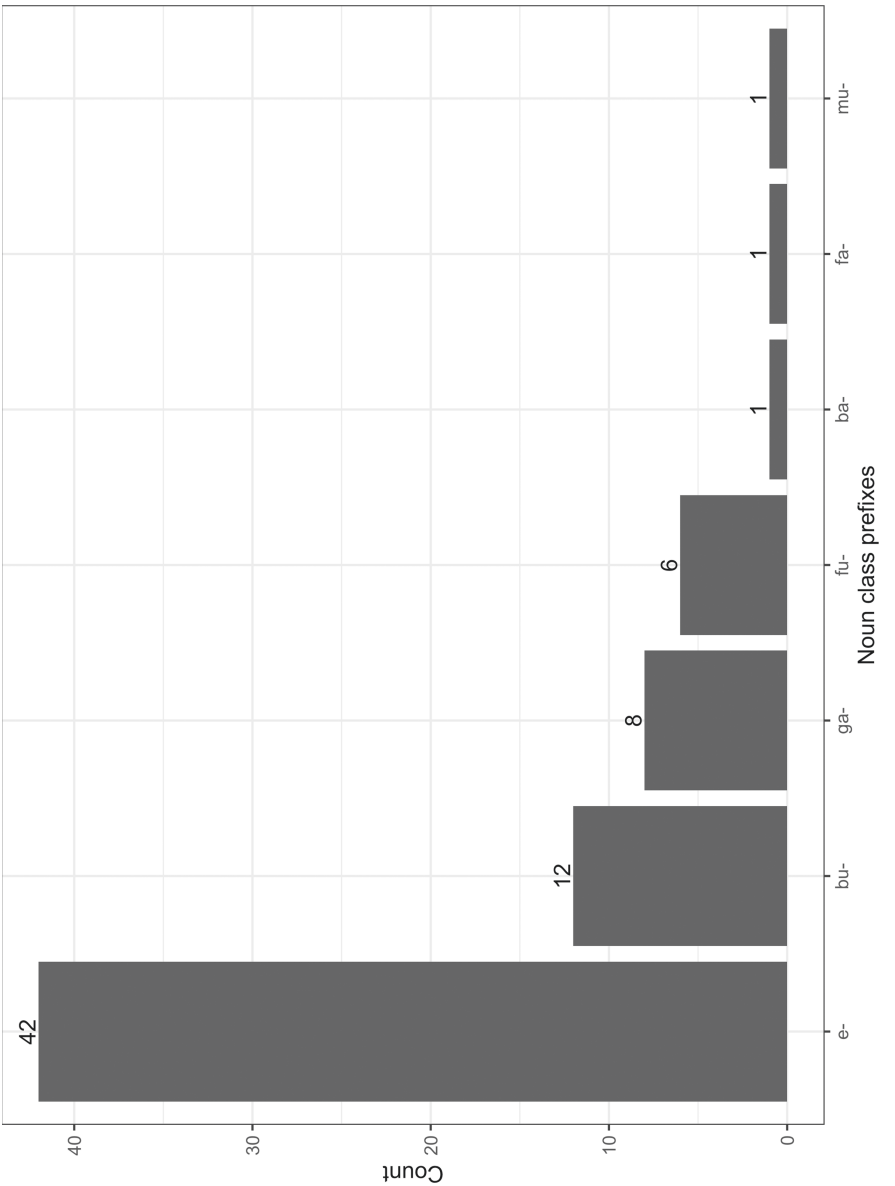

Figure 5: Denominal verbs formed with the verbaliser -et (N = 71).

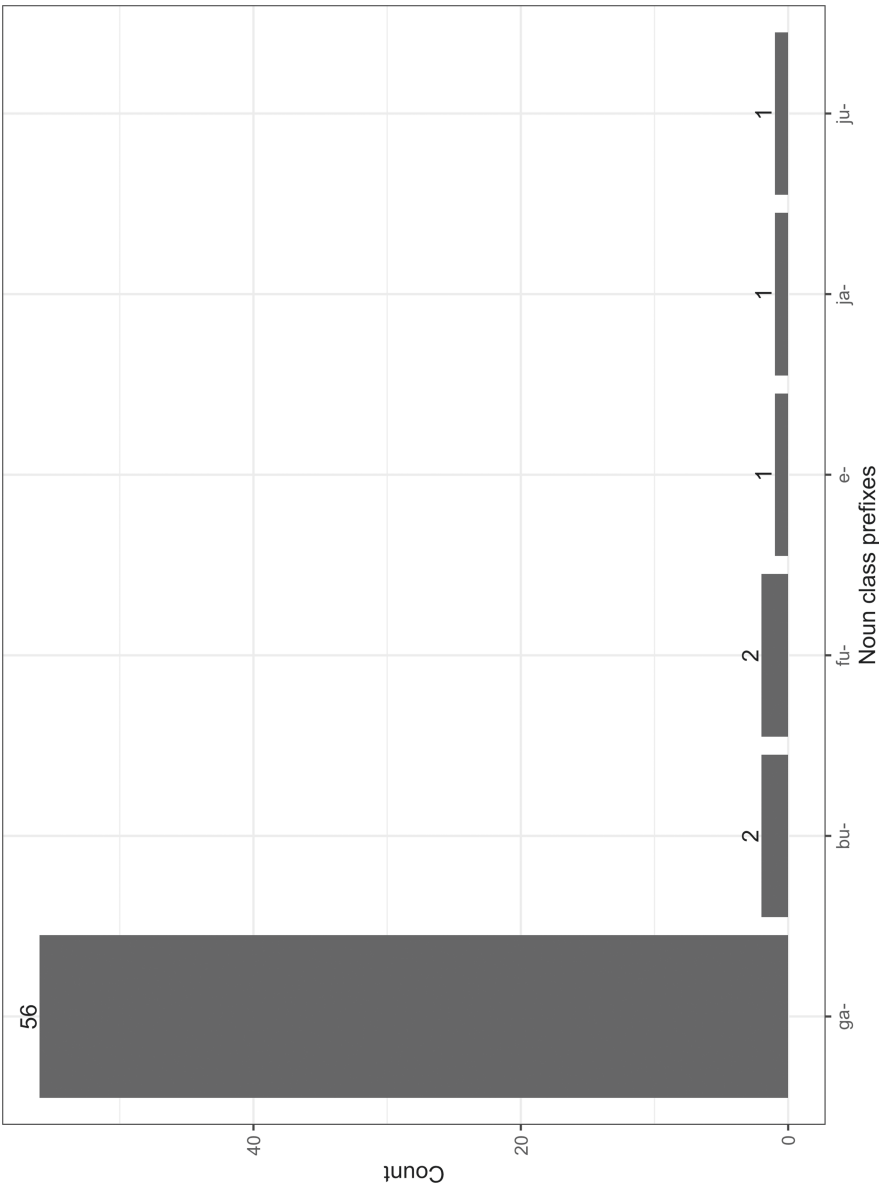

Figure 6: Borrowed non-finite verbs mostly in class ga- (N = 63).

(80) The loanword 'paint/painting' (from French peinture) takes the prefix *ga-*

Appu	n-a-hal-e	gá-pettur
Appu(I.SG)	REAL-I.3SG-stop-CPL	CLga-paint

'Appu has stopped painting'

(81) The loanword 'play/playing football' (from French ballon) takes the prefix *ja-*

Appu	na-hal-e	ja-baloŋ
Appu(I.SG)	REAL.I.3SG-stop-CPL	CLja-ball

'Appu has stopped playing football.'

(82) The loanword 'behave like a bandit' (from French bandit) takes the prefix *bu-*

Appu	na-hal-e	bu-bandi-et
Appu(I.SG)	REAL.I.3SG-stop-CPL	CLbu-bandit-VBLZ

'Appu has being stubborn (behaving like a bandit).'

Notice that the verbs used in examples (80) to (82) for illustration are derived from nouns. It should be noted here that this does not influence their choice of NCP. The corresponding borrowed nouns are *Ø-pettur* 'paint', *fu-baloŋ* 'ball' and *e-bandi* 'bandit', which take a zero prefix, NCP *fu-* and NCP *e-* respectively.

In short, derived and borrowed verbs are assigned to several different classes in their non-finite forms instead of a single infinitive class. This reinforces the claim that Eegimaa has an overt classification system for verbs.

4.4.4 Prefix alternations on non-finite verbs

One of the most striking features of Eegimaa non-finite verbs is their ability to allow alternations between prefixes on the same stem (Sagna 2008: 311). The following three main subtypes of alternations are attested, discussed in Chapter II (see Section 2.4.1. for a discussion of stems with flexible part-of-speech categorisation), following Sagna (2011b; 2013a; 2013b). In the first case, prefix alternation distinguishes a noun and a verb. Example (83) shows that NCP *e-* is attested with the non-finite verb 'singing',[34] but NCP *ga-* is not, as shown in (84). Instead, the latter is only attested with the noun 'song', exemplified in (85).

34 Note that the suffix *-ol* functions as an object marker when it combines with verbal stems and as a possessive marker when it combines with nominal stems.

(83) The non-finite verb ‘singing’ takes ncp *e-*

Wóli	ji-hal-e	é-ffoñ-ol
1PL.EXCL	1PL.EXCL-stop-CPL	CLe-sing-3SG.OBJ

‘We have stopped singing him/her (i.e. his songs).’

(84) Ungrammatical use of ncp *ga-* with the non-finite verb ‘singing’

*Wóli	ji-hal-e	gá-ffoñ-ol
1PL.EXCL	1PL.EXCL-stop-CPL	CLga-song-3SG.POSS

‘*We have stopped songing him/her.’

(85) The noun ‘song’ takes ncp *ga-*

Wóli	ji-ffas-e	gá-ffoñ-ol
1PL.EXCL	1PL.EXCL-know-CPL	CLga-song-3SG.POSS

‘We know his/her song.’

The second subtype of alternation is a derivational strategy with no change in word class, and where the variation in noun class prefix indicates the existence of different lexemes (See Chapter II Section 2.4.1.2). The alternations between prefixes *e-* and *ga-* in examples (86) and (87) distinguish two lexemes with the meanings of ‘spitting’ and ‘vomiting’.

(86) The non-finite verb ‘spit’ takes ncp *e-*

aare-aw	umu	ni	e-mas
[CL1]woman-I.SG.DEF	I.SG.COP	PREP	CLe-spit

‘The woman is spitting.’

(87) The non-finite verb ‘vomit’ takes ncp *ga-*

aare-aw	umu	ni	ga-mas
[CL1]woman-I.SG.DEF	I.SG.COP	PREP	CLga-spit

‘The woman is vomiting.’

The third subtype of alternation is characterised by the use of different NCPs with the same stem yielding non-finite forms with subtle or no apparent semantic distinctions. These are the instances that Sapir (1965: 77) describes as free variation in Jóola Foñi. Whenever these alternations are possible in Eegimaa, one of the prefixes must be the NCP *e-*, which is the default noun class marker in the nominal domain. I will analyse this phenomenon as a manifestation of transpositional inflection, which is a kind of word-class-changing inflection like the transposition from verb to participle (Haspelmath 1996; Haspelmath & Sims 2010; Spencer 2013). As demonstrated in Chapter VII, NCP *e-* is used in these instances of prefix

alternations, to indicate event delimitation. Note that verbs in the second type of alternations also use NCP *e-* for event delimitation. Examples (88) and (89) illustrate the use of different prefixes with the same stem, where there is no apparent semantic distinction. Note that the use of the object *a-ññil-aw* 'the child' as an object would also be grammatical.

(88) The root 'suckle' with ncp *e-*

aare-aw	umu	ni	e-raf-en
[CL1]woman-I.SG.DEF	I.SG.COP	PREP	CLe-suckle-CAUS
a-ññil-aw			
CLa-child(I.SG)-I.SG.DEF			

'The woman is breastfeeding the child.' (ss20060409_ab)

(89) The root 'suckle' with ncp *ga-*

aare-aw	umu	ni	ga-raf-en
[CL1]woman-I.SG.DEF	I.SG.COP	PREP	CLga-suckle-CAUS

'The woman is breastfeeding the child.' (ss20060409_ab)

Following from Sagna (2013a; 2014), I will demonstrate in chapter VI that these alternations are motivated by features associated with semantic transitivity. I will show that there are two levels at which Eegimaa non-finite verbs are classified. The first level, which I shall call "*between high and low transitivity*", is shown in the alternation between the prefix *e-* and other prefixes like *ba-* and *ga-*. I will argue that NCP *e-* is used to express features such as individuation (high transitivity), including definiteness and specificity, whereas NCPs like *ba-* and *ga-* (low transitivity) tend to express features such as non-individuation, including indefiniteness and non-specificity. The second level of classification is "*within low transitivity*" and is characterised by the semantic categorisation which underlies the assignment of non-finite verbs into classes like *ba-* and *ga-*.

4.5 The nature of Eegimaa non-finite verb forms from a typological perspective

The discussion of the nominal and verbal properties of Eegimaa non-finite verb forms in Section 4.3 shows that these non-finite verbs have both nominal and verbal properties. But the question that remains is: what is the real nature of the Eegimaa non-finite verb forms? In the next sections, I show that Eegimaa non-finite verbs are different from deverbal nouns (cf. 4.5.1). I also compare characteristics of Eegimaa non-finite verbs with infinitives in 4.5.2, verbal nouns in 4.5.3 and converbs in 4.5.4.

4.5.1 Comparison with deverbal nominalisations

Deverbal nouns are derived lexemes which, as Comrie and Thompson (2007: 334) point out, have the syntactic behaviour of non-derived nouns. In Eegimaa, deverbal nouns are generally formed by suffixation and then prefixation of a stem, as discussed briefly in Chapter II (Section 2.2.1.5.2). I discuss the five main types of deverbal nominalisation strategies in this section, to compare them with non-finite verbs, starting with agentive nominalisation

Agentive nouns are formed by combining the suffix *-a* with a stem which has the potential to be used verbally and to which a noun class prefix is attached. This is illustrated in examples (90) and (91), where the agentive suffix *-a* is attached to the stems *-kkúj* 'wrestle' and *-jjaŋ* 'light/to be light'. Outputs of agentive nominalisations are generally nouns denoting animates like humans as in (90).[35] However, the agentive suffix can also be used, though less productively, to derive instrument nouns as, in example (91). Crucially, agentive nouns do not retain any verbal properties like taking objects.

(90) Example of human agentive noun
ni-jug-e á-kkuj-a
REAL.1SG-see-CPL CLa-wrestle-AGT(I.SG)
'I have seen a wrestler.'

(91) Example of instrument noun formed with the agentive suffix
ni-jug-e e-jjaŋ-a
REAL.1SG-see-CPL CLe-light-AGT(II.SG)
'I have seen a lamp.'

Another common type of argument nominalisation found in Eegimaa is manner nominalisation, which is productively formed by circumfixation, with the joint use of the prefix *ba-* and the suffix *-er* to describe the manner or the style of doing something. This is illustrated in example (92), where the derived noun *bá-kkuj-er* 'way (style) of wrestling' occurs in object position and takes the possessive suffix *-ol*. Note that, though it is possible to find either of these two affixes elsewhere in the Eegimaa grammar, none of them can occur alone to express manner nominalisation (see Sagna 2008). As with agentive nouns, manner nominalisations do not retain verbal properties, like combining with TAM markers or taking objects.

35 Some animal names like *ju-ttobul-a* 'kind of bloodsucking bird' are also formed with the agentive suffix *-a*.

(92) Example of manner nominalisation
ni-ffas-e bá-kkuj-er-ol
1SG-know-CPL CLba-wrestle-MANNER-3SG.POSS(III.SG)
'I know his/her style of wrestling.'

A third important type of argument nominalisation where verbal properties are not retained comes from the productive use of the suffix *-úm/-um* to derive different kinds of nominalisations such as the instrument nominalisation illustrated in (93) and product nominalisation in (94).

(93) The suffix *-úm/-um* used as an instrument nominalisation marker
fi-hiç-um-ol fu-lo-e
CLfu-write-INSTR(IV.SG)3SG.POSS IV.SG-fall-CPL
'His/her pen has fallen down'

(94) The suffix *-úm/-um* used as a product nominalisation marker
bú-ffulor-um e-luhunjaŋ
CLbu-crawl-PROD(III.SG) CLe-snake(II.SG)
'The traces of a snake.'

Eegimaa also has a kind of argument nominalisation using the suffix *-ay* and which in Jóola linguistics is referred to as 'abstract nominalisation' following Sapir (1965). The nouns derived using this suffix generally denote abstract entities and may be glossed as 'something capable of being X-ed', as exemplified in (95).

(95) Abstract nominalisation *-or*
e-fem mi-tiñ-ay
CLe-kind.of.fruit CLmu-eat-ABSTR
'The "efem" fruit is something edible.'

The last type of deverbal nominalisation to be discussed here may be termed reciprocal nominalisation, because it involves the use of the reciprocal suffix *-or* to derive nouns which denote entities involved in a reciprocal relationship of some kind. These include, for example, enemies in a war as in (96), where the derived noun occurs in subject position.

(96) Reciprocal nominalisation with the suffix *-or*
u-ttig-or-il gu-te-tey
CLu-fight.WAR-RECIP(I.PL)-3PL.POSS I.PL-run-REDUP
'Their enemies have run away.'

In sum, the deverbal nouns discussed above are argument nominalisations, which, as pointed out earlier, are lexemes which do not retain properties of the verbs from which they are derived. They differ from non-finite verbs such as action/state nouns in that the latter do retain verbal properties as shown Section 4.3.2.

4.5.2 Are Eegimaa non-finite verbs infinitives?

In previous works on Jóola languages (Kennedy 1964; Sapir 1965; Bassène 2007; Sagna 2008) and other Atlantic languages (e.g. Kihm 2005; N'Diaye-Correard 1970; Cobbinah 2013), the term 'infinitive' is used to refer to the kinds of non-finite verbs found in these languages. Infinitives are, as Haspelmath (1995: 28) points out, commonly viewed as "the basic and maximally unmarked forms of the verb". In other words, infinitives are generally defined as inflectional verb forms which are regularly formed from any verb (Koptjevskaja-Tamm 1993: 33). The cross-linguistic characteristics of infinitives are that they occur in complement clauses just like verbal nouns discussed below, and in purposive subordinate clause as converbs do. Another characteristic of infinitives is that, while their subject is generally omitted, they take objects and are modified by adverbs just like finite verbs. Eegimaa non-finite verbs exhibit most properties ascribed to infinitives cross-linguistically, by functioning as complements of CTPs (cf. 4.3.1.3), by occurring without overt subjects, by taking objects, by occurring in purposive clauses, and by taking adverbial modification as shown in Section 4.3.2. However, Eegimaa non-finites lack an important defining criterion of infinitives, that is, the ability to be formed regularly with any verb, as shown by their combination with different noun class prefixes (see Section 4.4). Thus, labelling Eegimaa non-finite verb forms as infinitives would background the fact that they do not have all the characteristics cross-linguistically associated with infinitives. This is why the term infinitive is not used to describe Eegimaa non-finite verbs here.

4.5.3 Are Eegimaa non-finite verbs verbal nouns?

Eegimaa non-finite verbs also have properties of verbal nouns. The term 'verbal noun' (or masdar is some traditions), has been used to describe non-finite verbs in some Atlantic languages (Cobbinah 2013; Creissels et al. 2013; Watson 2015). In the typological literature it is used to refer to different kinds of complement clauses including action/state nouns and gerunds. The main characteristics of verbal nouns, as set out by Noonan (2007: 70), are that they are nominalised predications which have the internal structure of noun phrases and may be pluralised

like non-derived count nouns. Crucially, the notional subject and the object arguments of the nominalised predicate have a genitival relation with the latter.

Eegimaa non-finite verbs have properties of verbal nouns listed in Noonan (2007: 70). They are nominalised complements which take the role of head of the NPs; occur with definite article as do non-derived nouns, take relative clauses as modifiers, and combine with the possessive suffix. However, they cannot pluralise like underived count nouns. In that sense, they are closer to action/state nominalisations, which are nominalised forms "meaning the fact, the act, the quality or occurrence" of the verb or adjective they are derived from (Comrie & Thompson 2007: 335).

Verbal nouns differ from infinitives in that they cannot take an object in the accusative in languages that have case marking, nor can they be modified by adverbs. Instead, action nouns are modified by adjectives. Eegimaa does not have case marking. But as we saw above, Eegimaa non-finite verb forms do take objects, and can be modified by adverbs and also adjectives, which indicates a closer affinity to infinitives. However, they are not formed the same way for all verbs. Such irregularity is a typical property of action nouns rather than infinitives. The characteristics of Eegimaa non-finite verbs discussed above do not point at a clear opposition between verbal nouns and infinitives.

Verbal nouns also include verb forms like English gerunds. Gerunds are often referred to as "mixed categories" because they have the internal structure of the VP in that they take objects and adverbial modifications like infinitives, but their external structure is that of NPs, since they can occur in subject and object positions (Kroeger K. 2004). The term gerund has differing uses in the literature. Haspelmath (1995: 45) shows that the forms that are referred to as gerunds in Romance languages like the French *gérondif* are typical converbs (verbal adverbs). By contrast, the English and Latin types of gerunds are verbal nouns. The Eegimaa non-finite verbs also exhibit properties of gerunds of the English type like taking objects and occurring in argument position. Labelling these forms verbal nouns may indicate that these forms show important properties of nominals, but it may also background the fact that they include certain characteristics of both infinitives and converbs discussed below. For this reason, the term verbal noun is not used in this book as a cover term for the kinds of non-finite verbs found in Eegimaa.

4.5.4 Are Eegimaa non-finite verbs Converbs?

Eegimaa non-finite verb forms also have characteristics of converbs. Converbs are defined as non-finite verb forms which are mainly used to mark adverbial

subordination (Haspelmath 1995: 3; Koptjevskaja-Tamm 1993: 44). However, converbs are not used as complements of CTPs like desiderative verbs. As shown in example (57), Eegimaa non-finite verbs occur in subordinate purposive clauses following the directional/allative preposition *bi* 'to/for/in order to'. Occurring in subordinate clauses following the allative preposition is a characteristic shared by typical infinitives and converbs. Choosing to classify Eegimaa non-finite verbs as converbs would be problematic, since they are not used exclusively in purposive subordinate clauses. As a result, the term converb is not used to describe Eegimaa non-finite verb forms.

To summarise this section, Eegimaa non-finite verbs show properties cross-linguistically ascribed to infinitives, verbal nouns and converbs. Using any of these terms as a cover term will inevitably have the unwanted consequence of suggesting that such verb forms have properties which are unique to one type of non-finite verb form. For this reason, I will continue to use the term "non-finite verb" as a cover term to refer to dependent verb forms which, as shown above, have characteristics of infinitives, verbal nouns including action/state nouns, and converbs.

4.6 Summary

This chapter began with a discussion of the typological notion of finiteness, and an investigation of the distinctions between finite and non-finite forms in Eegimaa. Using criteria proposed in the literature (Nikolaeva 2013), I showed that Eegimaa non-finite verb forms can be distinguished from their finite counterparts based on the presence or absence of morphological, syntactic and semantic/pragmatic features. I examined their distributional properties in relation to complementation and showed that they have both nominal properties like combining with noun class markers, and verbal properties like taking objects. Eegimaa non-finite verbs have properties typical to infinitives, verbal nouns and converbs, which makes it difficult to use any of these terms as a cover term for them. As a result, I argue that the term "non-finite verb form" is a better term to reflect their diverse characteristics. Based on the examination of the nominal and verbal properties of Eegimaa non-finite verbs, I show that they have characteristics of mixed categories, as shown by their internal and external syntax.

One of the principle aims of this chapter has been to justify my previous arguments (e.g. Sagna 2008) that Eegimaa non-finite verb forms are morphologically classified. I showed that these non-finite verb forms, and also borrowed verbs from French and Wolof, are assigned to 15 morphological classes as indicated by the prefixes they take. In the rest of the book, I show that the combination

of a given non-finite verb with a given noun class prefix is lexically determined. However, the classification of these verb forms into classes reflects a semantically motivated strategy of event categorisation. I also showed that, in addition to the classification of the Eegimaa non-finite verbs, there is also a possibility to alternate the different prefixes on non-finite verbs with the nominal default prefix *e-*, to express differences related to the semantic transitivity hierarchy. These issues are investigated in detail in Chapters VI to VIII.

5 Noun class semantics

5.1 Introduction

This chapter investigates the semantic parameters underlying the grammatical classification of nouns in Eegimaa. The view taken here is that much of the Eegimaa grammatical classification of nouns reflects a synchronic semantic categorisation of entities, and that both physical properties and culture-specific principles of semantic categorisation are used.

The question of whether Niger-Congo noun class systems have semantic content is a controversial one. It has been a preoccupation for scholars working on these systems of nominal classification since the early days of research in these languages (see e.g. Torrend 1891; Meinhof 1906). Among the questions that arise are the following. If noun class systems have underlying semantic bases, how much of the lexicons in these languages can be accounted for using semantic criteria, and what is the nature of the semantic parameters underlying such classifications?

Linguists who argue against the semantic bases of noun class system often contend that, aside from the animate/human genders and other genders like the diminutive and locative genders, Niger-Congo noun class system are mostly devoid of semantics. These arguments have been made for Bantu languages, but they extend to other Niger-Congo noun class systems such as Atlantic languages. The rejection of possible synchronic semantic motivations for the classification of nouns is often based on the argument that, if no semantic common denominator can be found between nouns of the same class, one cannot speak of semantically based classification in a principled way. Such claims often go hand-in-hand with the idea that nominal classification systems were historically semantically more coherent (Givón 1971: 33). The claim is that they were "historically based on cognitive distinctions such as human, plant, animal, congregation, size, shape, but have become conventional and overtly marked with almost all nouns" (Schadeberg 2001: 8). The dispersion of nouns denoting entities such as body parts, plants, fish and also loanwords into several classes or genders is often taken as evidence for the lack of synchronic semantic basis of Niger-Congo noun class systems.

In the last few decades, several authors working on the semantic properties of noun class systems using the Prototype Theory, discussed below, have challenged the view that Niger-Congo noun class systems are mainly arbitrary synchronically, and that semantic categorisation was only of historical relevance (Spitulnik 1989; Contini-Morava 1997 (1994); 2002; Breedveld 1995a; Selvik 2001).

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Based on the Prototype Theory of categorisation that developed from research in cognitive psychology and cognitive linguistics, these authors argue that the classification of nouns reflects a conceptual categorisation of entities denoted by the classified nouns. Their arguments are based on the idea that classificatory criteria are not limited to common denominators between the classified entities; instead the main principles of semantic categorisation in noun class systems include prototypicality, family resemblance, conceptual metaphor and metonymy (Lakoff 1986; 1987).

In this chapter, I argue that genders and morphological classes "are associated with semantic content" (Sagna 2008; 2011a). I demonstrate in the following sections that:

a) Shape is a productive and central classificatory criterion of semantic categorisation in Eegimaa and interacts with other criteria like size and consistency.
b) Culture-specific parameters of categorisation account for the classification of nouns denoting culturally salient entities.
c) The dispersion of loanwords and nouns denoting entities such as body parts reflects a semantic categorisation of entities based on shape and culture-specific principles of categorisation.
d) Mismatches between morphology and agreement, e.g. with lexical hybrids, reflect the multiple conceptualisation and categorisation of their referents (Sagna 2012).

This chapter is organised as follows. Section 5.2 presents the cross-linguistic semantic parameters found in different types of nominal classification systems, and presents Prototype Theory, the approach used to account for the semantic organisation of the Eegimaa noun class system. In section 5.3, I examine the semantics of the individual genders and their morphological classes, including a discussion of evaluative morphology and expressions of collective and distributive meanings. Section 5.4 summarises the discussion.

5.2 Semantic parameters in nominal classification systems

5.2.1 Typological parameters of semantic categorisation

All types of nominal classification systems have some level of semantic organisation, and "different classifier types tend to correlate with different semantic parameters" Aikhenvald (2000: 271). In typological research on the semantics of nominal classification systems, several classificatory properties are recognised as playing a central role in the categorisation of the referents of the nouns that are

grammatically classified (see e.g. Denny & Creider 1976; Allan 1977; Frawley 1992). Aikhenvald (2000) divides these parameters into three major classes: animacy, physical properties and functions.

The parameter of animacy is very common in the languages of the world. Cross-linguistically, the classificatory properties related to the animacy parameter include social status, kinship, function and age (Aikhenvald 2000: 272). In Eegimaa animacy includes human and non-human distinctions, which are central to the semantic organisation of the noun class system. As will be shown below, the Eegimaa category of nouns of human denotation (conventionally labelled Classes 1 and 2 in the analyses of Niger-Congo noun class systems that use the traditional approach) includes the categories of kinship and identity groups. However, other nouns of human-denotation, like those denoting special humans, are found in Gender II.[36] Thus, not all nouns of human-denotation are found in Gender I.

"Physical properties" is the second parameter of noun categorisation discussed by Aikhenvald (2000). The semantic categories of this classificatory parameter come from Frawley (1992) and ultimately from Denny (1976; 1979) and Allan (1977). In Frawley's (1992) classification, the parameter of physical properties includes the following four major properties: *extendedness*, which refers to the way entities occupy space, including as its subcategories, dimensionality/shape and directionality (vertical and horizontal), *interioricity*, which is "the way the that an entity differentiates its inside from its outside" (Frawley, 1992: 125), *size* (small and diminutive vs. large and augmentative), and *consistency*, whose most important values are flexibility and rigidity. Note, as Allan (1977) does, that consistency tends to co-occur with other physical properties and rarely alone. Allan (1977) proposes other minor categories of the parameter of physical properties, namely *arrangement* ("non-inherent or resulting configuration" (Frawley 1992: 128), *quanta* ("aggregation of entities" (Frawley 1992: 128), *material*, which shows the material used to make an entity and *location*, where locative meaning is expressed, e.g. locatives in Atlantic and Bantu languages.

Animacy and physical properties are generally seen as universal parameters (Aikhenvald 2006). In that sense they differ from the *functional* parameter, which can be considered an instance of culture-specific criteria of categorisation (Adams & Conklin 1973; Aikhenvald 2000; Craig 1986b). Functional properties classify entities based on the types of interactions humans have with them (Denny 1976).

36 Recall from Chapter III that genders are distinguished from morphological classes. Gender I has several morphological classes whose semantics properties are discussed in this chapter.

As Adams and Conklin (1973: 7) put it, these "function-based classes are language-specific and reflect cultural orientations of the speakers".

Table 18, from Sagna (2008: 217), is an adaptation of Aikhenvald's (2000: 306) main parameters of semantic categorisation found in the different kinds of nominal classification systems. The table will be helpful when the semantic properties of the Eegimaa noun class system are discussed against the general typological background.

Table 18: Preferred semantic parameters in classifier systems.

Classifier	Typical semantics
Noun classes	Animacy, physical properties, rarely nature or function
Numeral classifiers	Animacy, social status and kinship relationship, directionality and orientation, physical properties, nature, quanta, arrangement, functional properties
Noun classifiers	Social status, functional properties, nature
Verbal classifiers	Physical properties, directionality and orientation, nature, function, quanta, arrangement, rarely animacy.
Relational classifier	Functional properties, nature
Possessed classifiers	Physical properties, nature, animacy, functional properties
Locative classifiers	Physical properties, nature, rarely animacy
Deictic classifiers	Directionality and orientation, physical properties, nature

The three parameters of categorisation discussed above are used, in this chapter, to investigate the semantic properties of the Eegimaa noun class system. Since this is a grammaticalised nominal classification system, a fair degree of opacity in semantic assignment is to be expected. However, I will show that there is much more semantic categorisation at work in Eegimaa than is generally acknowledged for Niger-Congo noun class systems. My argument builds from the claims made in the literature that shape and size are important parameters of semantic categorisation of entities in noun class systems (Jurafsky 1996; Grinevald & Seifart 2004; Seifart 2005; Aikhenvald 2012; Di Garbo 2014; Gibson, Guerois & Marten 2017). In previous research (Sagna 2008; Sagna 2012), I also showed that physical properties such as shape/dimensionality and size play a central role in the Eegimaa noun classification system and co-occur with the parameter of consistency. I will also show that culture-specific principles of categorisation such as domains of experience (Lakoff 1987) are used to single out entities of cultural significance. I will argue that much of the semantic categorisation in Eegimaa is organised around prototypicality and family resemblance.

5.2.2 Prototype theory & conceptual categorisation

There are two main competing approaches on the study of semantic properties of Niger-Congo noun class systems, as pointed out in the introduction: the classical approach and Prototype Theory.

The classical approach, also referred to as the Aristotelian approach to categorisation, is based on the search for a common denominator between referents of nouns in the same class from the traditional perspective, or gender. Entities are analysed as members of a category if they exhibit all the necessary and sufficient criteria required to be a member of a given category. Thus, in this approach category membership is a question of either/or, where an entity either does or does not belong to a category. Most traditional grammars dealing with noun class semantics in Niger-Congo languages use the classical approach to categorisation. The idea that noun classification may have underlying synchronic semantic motivations is generally rejected using this approach, based on the absence of dedicated morphological classes or genders for nouns denoting semantic fields like body parts, animals, fish etc. The traditional class pair 1 and 2, which includes animates or humans only, is often described as one of the clearest cases of semantic homogeneity in Niger-Congo noun class systems based on this approach. This point of view generally goes together with the belief that noun class systems were historically semantically more coherent, an argument made in Bantu languages (Givón 1971; Schadeberg 2001). Note that this historical account has been challenged by a number of scholars. For example, Maho (1999: 69) argues that "assuming a transparent and/or regular semantic model for Proto-Bantu may not be that wise. Since there are no modern Bantu languages with [such] easily defined noun class [semantic] systems [. . .] there is no reason to expect Proto-Bantu to have exhibited such regularity." Accounting for noun class semantics using the classical theory of categorisation can help capture categories like the traditional human classes, but it fails to account for a number of categorisation processes, like those based on family resemblance. Prototype Theory proves to be a more powerful tool to account for such instances.

Prototype Theory of categorisation was proposed as an alternative approach to account for processes which are not easily captured using the classical approach. According to the theory of categorisation developed in Cognitive Linguistics, ultimately from Wittgenstein (1953) and Rosch (1973, 1975), categories have an internal structure. Wittgenstein's analysis of the category of games shows that membership to this category is not based on shared properties between all games, but rather on a network of similarities which are better characterised as "family resemblance". The idea is that members of a family have resemblances, which include "build, features, colour of eyes, gait, temperament [which] overlap

and crisscross in the same way [as resemblances between games do]". Rosch and her colleagues argue that categories are organised around prototypes, i.e. best examples, with other category members being included in the category based on degree of resemblance to the prototype. These have been central to the development of prototype theory.

There are different versions of prototype theory (Kleiber 1990; Croft & Cruse 2004). In the early version of prototype theory, it was argued that categories were organised around their most representative members or exemplars, i.e. their prototype, and that category membership was determined by the degree of similarity to the prototype. Categories were seen as having fuzzy boundaries and the most representative members of a category claimed to regulate class membership. This standard version of prototype, as Kleiber (1990) calls it, was replaced by a new version following Rosch (1978) and further work in linguistic categorisation (Lakoff 1986; Lakoff 1987; Kleiber 1990; Taylor 2003; Croft & Cruse 2004).

In the model used here, a prototype is viewed as "a mental representation, [and] as some sort of cognitive reference point" (Ungerer & Schmid 2006: 42). It is better viewed as "the coming together of a set of attributes" (Taylor 2003: 64), rather than an entity that functions as the most central member of a category. Viewed from this perspective, it is assumed that categories are not homogeneous, as argued in the classical model, but have an internal structure. The best examples of a category will be referred to as instantiations of that category. For example, I will argue that three-dimensional/spherical objects instantiate the prototype of round objects, which in Eegimaa are found in Gender IV. I also use these arguments to show that it is possible for one and the same entity to belong to different categories simultaneously, in what I have referred to as multiple morphosyntactic and conceptual semantic categorisation (Sagna 2012).

In this chapter, I use prototype theory, as is done in a number of research in African noun class semantics systems (Spitulnik 1989; Contini-Morava 1997; 2002; Breedveld 1995b; Selvik 2001), to investigate the semantic properties of the Eegimaa noun class system. Genders will be analysed as the primary locus of semantic categorisation. Their nominal morphological classes (including singular and plural), and the subclasses which distinguish number values (with singular and plural treated separately) will be seen as semantic subcategories.[37] Put

37 To give a more precise analysis of the Eegimaa noun class semantic in this chapter, it will be useful to differentiate the nominal morphological class level (or M-classes), which includes sets of nouns having the same paradigms in the singular and the plural, from their subclasses. The subclass level is made up of sets of nouns that take the same prefix in the singular and the plural. This will be referred to as number-subclass level, comprising singular M-classes or plural M-classes, where the singular and plural forms can be analysed separately. Another op-

differently, gender constitutes the most inclusive semantic level. I will argue that when semantic categorisation is relevant at the gender level, it tends to also be found at the levels of morphological class and number value subclass. However, the reverse is not true, so that semantic contents associated with the lower levels (the morphological class and subclass levels) are not necessarily found at the level of the gender.

In the next section I present different approaches that can be used to account for the semantic categorisation in noun class systems and present the one used for my analysis of Eegimaa.

5.2.3 Ways of identifying noun class semantics in Eegimaa

There are two ways of providing evidence that a noun class system like Eegimaa has semantic bases. The first is to take a gender/class-to-semantic domain approach and provide a frequency analysis to determine how many nouns have the specific semantic properties attributed to a gender or morphological class. This approach would work if a high percentage of entities are categorised using the semantic principles under discussion. Gender I and Gender VI can be analysed using this approach. For example, 99% of the 118 nouns taking NCP *a-*, belong to Gender I and denote anthropomorphic entities; the only exception is *a-sum* 'donkey'. This justifies the traditional label of "human" for this gender. Similarly, 98% of the 50 recorded nouns of Gender VI take NCP *ju-/ji-* and denote small entities; the only exception is *ji-ggaj* 'panther'. Using this approach to analyse a noun class system like Eegimaa's quickly reveals the limitations of such a method, as most genders include nouns from various semantic fields.

The alternative is the semantics-to-class/gender analytical approach that I adopt here. This consists of examining the semantic properties of entities first, to determine whether specific semantic properties are associated with a gender. Here, it is not necessary for high percentages of nouns to be found to exhibit the semantic properties under study in each gender. Rather, the basic assumption is that genders and morphological classes are associated – to a greater or lesser extent – with semantic content. The strong associations between semantic properties and genders is revealed, e.g. through the integration of loanwords, the use of the dummy stem *-nde* 'thingamajig', agreement mismatches and prefix alter-

tion would have been to distinguish the levels by separating the nominal paradigms from "noun class", as in Watson (2015). However, given the various and often confusing uses of the term "noun class" in the literature, I will avoid using this term here.

nations. The categorisation of loanwords such as *fu-baloŋ* 'football' (from French ballon) and *ga-kkart* 'card' (from French carte) is a good indication that shape is encoded in the Eegimaa grammar, with round shape being strongly associated with Gender IV, using NCP *fu-*, and flat shape with Gender V, using NCP *ga-*. The use of the dummy stem *-nde* 'thingamajig', which can take prefixes from all genders (see the combination with Genders I to VII in Table 19), reveals that genders are strongly associated with semantic content.

Table 19: Alternation of different NCPs with the dummy stem *-nde* 'thingamajig'.

Gender	Thingamajig	Semantic content
I	a-nde	Human thingamajig
II	e-nde	Nonspecific thingamajig
III	bi-nde	Tree/enormous thingamajig
IV	fi-nde	Round/thick thingamajig
V	ga-nde	Flat/big/impaired thingamajig
VI	ji-nde	Small thingamajig
VII	ñi-nde	Thingamajig of economic/cultural significance

The strong association of semantic properties with certain genders is also revealed by prefix alternations on a single noun stem, a strategy commonly used to express evaluative meanings such as diminutive and augmentative in both singular and plural. Recall that Eegimaa prefixes always replace each other to express different meanings; they are never combined. Comparing Table 19 and Table 20 shows that humanness is associated to Gender I, smallness to Gender VI, round shape and fatness to Gender IV, big size and derogatory meaning to Gender V, and diminutive collective meaning to one of the morphological classes of Gender III.

Table 20: Alternation of different NCPs with the stem *-muse* 'teacher'.

Gender	Singular	Gloss	Plural	Gloss
I	**á-**muse	'teacher'	**é-**muse	'teachers'
VI	**jú-**muse	'small/insignificant teacher'	**mú-**muse	'small/insignificant teachers'
IV	**fú-**muse	'big/fat teacher'	**gú-**muse	'big/fat teachers'
V	**gá-**muse	'big/unlikable teacher'	**ú-**muse	'big/unlikable teachers'
III	**bá-**muse	'group of small/insignificant teachers'		

Culture-specific factors also play a crucial role in the semantic categorisation of nouns in Eegimaa, revealing that genders and their associated morphological

classes are strongly associated with semantic content. For example, the categorisation of special humans (see 5.3.2.1.1) in Gender II and that of humans viewed as weak in Gender V shows the important of social factors in grammatical classification. I will examine a semantic category of economic and social organisation where entities of high economic value like plots of rice fields are found. This, based on the importance of the production of wealth, shows that speakers' world view is reflected in the grammar as it has evolved over centuries in a traditional society. In this chapter, I provide a detailed analysis of the semantic bases of the Eegimaa noun class system, indicating the semantic properties associated with each gender or morphological class. I now turn to the examination of the semantics of individual genders and their morphological classes.

5.3 The semantics of individual genders and morphological classes

5.3.1 Humans and their sub-categories in Gender I

Gender I is referred to as the human gender because its most inclusive semantic property is humanness. In traditional analyses of Niger-Congo noun class systems, it is referred to as the human class. This also explains why personification of non-human entities (using prefix *ja-*, morphologically), is done in this gender with Gender I agreement. All nouns in this gender denote humans or humanlike entities, which include God, ancestors and good or bad supernatural beings thought to have human attributes. However, as will be shown in the sections below, not all nouns of human denotation are assigned to Gender I.

There are five morphological classes associated with this gender, three of which express further semantic subcategories of humans, namely "kinship", "identity groups" and "special humans". The other two, which I discuss first, describe no specific human semantic category. They include one lexically determined plural and the general or semantically unspecified morphological sub-class for humans.

5.3.1.1 The lexically determined M-class ø-/bug-

This class has only one item, *ø-an*/*bug-an* 'person/people'. Membership is lexically determined here; no further discussion of semantic status is warranted.

5.3.1.2 Unspecified humans in M-class *a-/u-*

Most nouns from Gender I are included in M-class *a-/u-*, illustrated in (1). This class is productive and can take loanwords denoting persons that exhibit no particular semantic characteristics warranting inclusion in other groups (see, e.g. the "identity group" discussed below). Humans (and human-like entities) in this class constitute no specific semantic category. We can therefore analyse this class as the general and semantically unspecified morphological class for Gender I. Recall from Chapter III that NCP *u-* is syncretic with the plural marker for many other morphological classes. Thus, it may be seen as the most general nominal plural marker.

(1)	Singular		Plural	
	a-yyaul	'zombie'	u-yyaul	'zombies'
	a-çindaçin	'kind of human spirit'	u-çindaçin	'kind of human spirit'
	a-ttepa	'builder'	u-ttepa	'builders'
	a-mbala	'fisherman (who uses a net)'	u-mbala	'fishermen (who use a net)'
	á-vvi	'king'	ú-vvi	'kings'

5.3.1.3 Kinship relations in M-Class a-/gu-

Nouns in this morphological class are either prototypically consanguineal kinship terms or terms for people having a close relationship with the Ego, which can thus be considered extended relations to the family circle. This morphological class is unproductive, as evidenced by the fact that no loanwords can be included in it (see (2)).

(2)	Singular		Plural	
	á-llinay	'opposite sex sibling'	gú-llinay	'opposite sex siblings'
	a-ttiay	'same sex sibling'	gu-ttiay	'same sex siblings'
	a-buge	'friend'	gu-buge	'friends'
	a-somay	'aunt'	gu-somay	'aunts'

5.3.1.4 Human identity groups in M-Class a-/e-

M-class *a-/e-* is made up of nouns that denote humans who belong to the same identity groups in that they have the same ethnic origin, or they come from the same geographical area, or they have the same linguistic and cultural background. Loanwords denoting humans who have the same modern professions are also assigned to this M-class. This is the morphological class to which most loanwords of human denotation are assigned, because those loanwords denote new professions, or they are names for groups of peoples that have come into contact with Eegimaa people relatively recently. Note that the prefix *e-* can function as a

plural marker and a collective marker (as argued in Sagna, 2011). For example, it can be used as in *é-fula* 'fula people' to refer to the fula/fulfulde as a people, or it can be used in an NP with a numeral as in *é-fula gúuba* 'two fula people' to indicate a plural.

(3)

Singular		Plural	
a-olof	'Wolof person'	e-olof	'Wolof people'
á-fula	'Fula person'	é-fula	'Fula people'
a-labe	'priest'	e-labe	'priests'
á-muse	'teacher'	é-muse	'teachers'
a-sef	'administration chief'	e-sef	'administration chiefs'

5.3.1.5 Special humans of Gender I in M-Class ø-/su-

There are only two nouns in this morphological class (see (4)). Compared to the nouns in other Gender I morphological classes, these nouns are analysed as belonging to a culture-specific category I called special humans (Sagna 2012). These humans are special in that they belong to the domain of experience labelled the domain of "birth giving". The domain of experience is a principle of categorisation according to which entities associated with a given sphere of human experience will tend to be classified together (Lakoff 1987: 93). In Eegimaa, all nouns of human denotation that take the plural prefix *su-*/*si-* refer to humans who have special attributes or a special status in society (see 5.3.2.1.1), as illustrated here with 'father' and 'mother'.

(4)

Singular		Plural	
Øpayya	'father/mother's opposite sex sibling'	si-payya	'fathers/mother's opposite sex siblings'
Øjayya	'mother/mother's same sex sibling'	si-jayya	'mothers/mother's same sex siblings'

To summarise this section, Gender I is a semantically based gender whose primary semantic criterion is humanness. All its corresponding morphological classes also have the meaning of humanness. So, the level of the gender is more inclusive than that of the morphological classes, which show a sub-categorisation of humans into further semantic groups. The main semantic sub-groups of humans identified for Gender I include identity groups and special humans. Gender I is an example of a culture-specific semantic category, which is reflected in the grammar with different morphological classes. Note that most singular nouns from this gender take NCP *a-*, but the semantic subcategories of the M-classes are more visible in the plural forms of nouns with, e.g. NCPS *gu-* and *e-*.

5.3.2 The default gender with some semantic subcategories in Gender II

In the descriptions of Niger-Congo noun class systems, where the traditional analytical approach is used, Gender II is generally referred to as the "default", "residual" or "catch-all" class. It is generally seen as the least semantically coherent gender, especially when compared to Gender I (traditional classes 1/2), which tends to include anthropomorphic entities only. In Eegimaa Gender II has the largest number of nouns as well as the largest number of loanwords. It functions as a transitional gender for borrowings, until they are reanalysed and integrated into other genders based on phonological or semantic criteria, e.g. to Gender IV based on round shape. Gender II has four associated morphological classes, namely *e-/su-*, *ji-/si-*, *ø-/su-*, and *y-/s-*. Although Gender II and its associated morphological classes are mostly semantically unspecified in Eegimaa, it should be noted that nouns of human denotation referring to a category of special humans, nouns denoting nuts and nouns denoting paired objects are found in this gender. Thus, even the default gender, which is not normally expected to have semantic content, has some semantic properties associated with it.

5.3.2.1 The main default M-class *e-/su-* and its semantic subcategories

This morphological class, illustrated in (5), includes by far the largest number of nouns and the largest variety of semantic fields, including mammals, body parts, birds, objects, fish, mass nouns and abstract nouns. Importantly, entities denoted by nouns in a given semantic field exhibit no common properties that motivate their grouping into this morphological class.

(5)

Singular		Plural	
e-jjamen	'goat'	si-jjamen	'goats'
e-hondor	'neck'	su-hondor	'necks'
é-gutum	'vulture'	sú-gutum	'vultures'
e-vval	'stone'	si-vval	'stones'
e-çiçit	'mulet'	si-çiçit	'mulets'
e-por	'powder'		
e-ber	'laughter'		

Most Eegimaa loanwords from languages such as French and Wolof are assigned to morphological class *e-/su-* (See (6)), which, as pointed out above, functions as a transitional class for some loanwords, before they are integrated into other classes on phonological or semantic grounds. An example is the forms *e-baloŋ* and *fu-baloŋ* 'football', which are both used freely to refer to the same entity. The

use of the prefix *e-* does not indicate any semantic property, whereas the prefix *fu-* highlights the round shape of the football.

(6)

Singular		Plural	
e-bioŋ	'plane'	si-bioŋ	'planes'
e-mobilet	'moped'	su-mobilet	'mopeds'
é-ddiw	'body lotion'	sí-ddiw	'body lotions'
e-semen	'week'	si-semen	'weeks'

Although most nouns are not assigned to this class based on semantics, there are, as pointed out above, nouns from nominal morphological class *e-*/*su-* which denote entities with common properties. They are discussed in the next subsections.

5.3.2.1.1 Special humans of Gender II

There is a category of nouns of human denotation that are found in Gender II, more specifically in M-class *e-*/*su-*. These nouns, which trigger syntactic agreement on their targets, are illustrated in (7) and (8). All nouns of human denotation in Gender II refer to special humans, that is, humans having qualities deemed extreme in some sense, whether positive or negative. Humans with particularly good qualities are exemplified in (7), and include people with outstanding strength, beauty or with a unique social status like the 'only child'.

(7)

Singular		Plural	
é-mbiro	'wrestling champion'	sí-mbiro	'wrestling champions'
e-janjaŋ	'very beautiful person'	si-janjaŋ	'very beautiful people'
é-rimbani	'only child'	sí-rimbani	'only children'

'Bad' special humans are exemplified in (8), and include humans who live at the margin of society like social deviants. That category includes 'prostitutes' and 'mad people'. Note that this negative categorisation can be temporary. For example, a bachelor is a man who, after undergoing his traditional initiation, remains unmarried after all or most members of his age group have married.

(8)

Singular		Plural	
e-jjobu	'prostitute'	su-jjobu	'prostitutes'
é-furah	'bachelor'	sú-furah	'bachelors'
e-soŋ	'mad person'	su-soŋ	'mad people'

The classification of humans in Gender II is based on culture-specific semantic criteria. This is an example of categorisation of humans by other humans based on social interactions. Loanwords that denote special humans, like *e-ccaga* 'prostitute' (from Wolof) and *e-bandi* 'bandit' (from French), are also incorporated into morphological class *e-*/*su-* of Gender II following the principle of categorising special humans separately from the ordinary humans categorised in Gender I. These recent loans show that the grammatical classification and semantic categorisation strategy of special humans is still productive.

The only other nouns of human denotation that use a prefix from Gender II, the plural prefix, are two hybrid nouns from Gender I morphological classes *ø-*/*su-* ('father' and 'mother') and the lexical hybrids *bá-jur* 'young woman', which controls Gender I and III agreement, but belongs to morphological class *ba-*/*su-*. Examples (9) and (10) illustrate mismatches between nominal morphology and NP agreement with prefix *su-* (Gender II), versus verbal agreement using Gender I (see Chapter III) for a detailed discussion of hybrid nouns and their relation to the agreement hierarchy).

(9) Plural hybrid *for* 'young woman'

sú-jur	sasu	gu-kka-e
CLsu-young.woman(IIPL/I.PL)	II.PL.DEF	I.3PL-go-CPL

'The young women have left.' (ss20131221_AmT)

(10) Plural hybrid *for* 'mother'

si-jjaya	sasu	gu-kka-e
CLsu-mother (II.PL/I.PL)	II.PL.DEF	I.3PL-go-CPL

'Those mothers have gone.'

Here it is worth observing that the lexical hybrids illustrated in these examples are classified in a multiple way: They take NCP *su-*, which is associated with Gender II, trigger Gender II agreement on the definite determiner *sasu*, but control Gender I agreement on the verb *gu-kka-e* 'they left'.[38] Such multiple semantic categorisation relates to what Langacker (1987: 38) calls "alternative construal", a way of shifting attention from one salient property of an entity to another. The multiplicity of agreement marking shows that the entities denoted by the hybrid nouns in question are conceptualised as special humans as shown, on the one hand,

38 The use of the plural prefix *su-* with these nouns indicates a special status for the entities they denote (see Sagna (2008; 2012), which argue that the special status of 'father', 'mother' and 'young woman' relates to the domain of experience of "birth-giving").

by use of Gender II markers. On the other hand, the humanness of these entities is also expressed in the grammar by the use of Gender I agreement. In short, the argument proposed here is that the semantic agreement mismatches triggered by hybrid nouns is a manifestation of multiple conceptual categorisation.

5.3.2.1.2 The categorisation of nuts

Another semantically coherent sub-category of entities in class *e-*/*su-* is that of nuts. As shown in 5.3.4.1, parts of plants are categorised based on their shape. For example, fruits are in Gender IV morphological class *fu-*/*gu-* because of their prototypical round shape whereas leaves are assigned to Gender IV because they are flat. By contrast, all nouns denoting nuts, regardless of their shape, are found in Gender II M-class *e-*/*su-* (see (11)).

(11)

Singular		Plural	
e-vvier	'palm nut'	si-vvier	'palm nuts'
é-kkaju	'cashew nut'	sí-kkaju	'cashew nuts'
e-kkokko	'coconut'	su-kkokko	'coconuts'
e-kkol	'nut'	su-kkol	'nuts'

5.3.2.1.3 Paired entities and distributivity

The plural prefix *su-* is also used as a distributive marker, indicating "the separation of members of a group, considered distinct in space, sort and time" Corbett (2000: 111). A few Eegimaa count and non-count nouns use the prefix *su-* to describe entities from different origins, such as visitors or things coming from different sources, such as different kinds of meat. Note that nouns that use the prefix *su-* to express distributive meaning also have plural forms if they are count nouns (see (12)). Put differently, some nouns can take the prefix *su-* in lieu of their normal singular and plural prefixes, if they are count nouns, to express distributive meaning.

(12)

Singular		Plurals	
a-jaora	'visitor'	e-jaora	'visitors/strangers'
ga-mmano	'grain of rice'	u-mmano	'grains of rice'
e-llu	'meat'	N/A	
Distributive plural			
si-jaora	'diverse visitors'		
si-mmano	'varieties of rice'		
su-llu	'meat from different animals'		

Most loanwords denoting paired entities can also take NCP *su-* instead of their plural markers, as exemplified in (13). In isolation, *u-ddalla* 'shoes' and *si-ddalla* 'shoes' are both possible. However, with the numeral 'two', which clearly shows that the entities referred to are being counted, NCP *u-* is preferred, as in *u-ddalla úuba* 'two shoes'. By contrast, ??*si-ddalla súuba* 'two shoes' with a numeral is odd, probably because the idea of a "pair" is already included in the use of NCP *su-*. A speaker using the form *si-ddalla* "shoes" (with no numeral) may also be referring to two shoes. So, NCP *su-* does not indicate uncountable entities. Conceptualising NCP *su-* as a distributive marker, it can be understood as indicating that the entities in question are conceived of as separate but complementary and belonging to the same paired unit.

(13)

Singular		Plurals		Distributive plural	
ga-ddalla	'shoe'	u-ddalla	'shoes'	si-ddalla	'shoes'
ga-bbata	'trainer'	u-bbata	'trainers'	si-bbata	'trainers'
ga-ccarah	'flipflop'	u-ccarah	'flipflops'	si-ccarah	'flip-flops'
ga-ggaŋ	'glove'	u-ggaŋ	'gloves'	si-ggaŋ	'gloves'
-	-	-	-	su-lunet	'glasses'
ga-kkawas	'sock'	u-kkawas	'socks'	si-kkawas	'socks'

5.3.2.2 Expression of euphemism with M-Class *ju-*/*su-*

Most nouns denoting mammals, e.g. *e-mundumo* 'hyena' and *é-ŋaŋ* 'lion' are included in morphological class *e-*/*su-* from Gender II. The noun *ji-ggaj*/*si-ggaj* 'panther/s', which belongs to Gender II, is the only noun in morphological class *ju-*/*su-*. This morphological class might be seen as an exception. However, I argue that it is actually a case of culture-specific semantic categorisation.

Eegimaa people have a funerary ritual, *ga-ggaj* 'panther ritual', which is performed during a man's funeral to "weaken his totemic panther" or to prevent him from being reincarnated as a cruel panther. Note here that the terms for 'panther' and 'panther ritual' share the same root *-ggaj* and differ only in the prefixes they take. Panthers were among the most feared predators in the Eegimaa speakers' environment.[39] This is probably what justifies the existence of a "weakening ritual", intended to reduce their impact on humans. This may also be the origin of the use of the diminutive prefix *ju-*/*ji-*, which normally combines with nouns denoting small entities including animals, as a euphemism to conceptually categorise the panther as a "small" entity. Euphemisms of this type have been pre-

39 Hyenas were also predators, but they were less of a threat to humans. In fact, they were and still are the animals most vilified among Eegimaa speakers.

viously reported in noun class systems (see Contini-Morava 1997). They are, as Contini-Morava suggests for Swahili, strategies of figuratively taming dangerous entities by representing them as insignificant entities. I propose that rather than being a random combination of the diminutive prefix with a noun denoting a dangerous animal, the use of NCP *ju-*/*ji-* in the singular for the noun 'panther' is an example of culture-specific semantic classification, which originates from a conceptual categorisation of the panther at some stage in the Eegimaa people's history. It is interesting to note that the noun 'panther' triggers syntactic agreement in Gender II in the singular and the plural (see Chapter III). So, this noun is not a hybrid noun. Also, the plural prefix it takes in the plural is *su-*/*si-*, which is from Gender II. Thus, the Eegimaa term for 'panther' shows multiple classifications in being classified morphologically with a prefix of Gender VI in the singular (with small entities) and Gender II in the plural (with other wild animals). This is another type of multiple morphosyntactic classification, reflecting multiple conceptual categorisation.

5.3.2.3 Prefixless nouns in M-Class *Ø*/*su-*

There are Gender II nouns (morphological class Ø/*su-*) that do not take a prefix in the singular but do in the plural. Most nouns in this class are loanwords (26 of 35, see (14)). The Eegimaa nouns and the loanwords do not belong to any one semantic field.

(14)

Singular		Plural	
tanaj (FR. tenailles)	'tong'	si-tanaj	'tongs'
lopitan (FR. L'hôpital)	'hospital'	su-lopitan	'hospitals'
jangu (WL. jangu)	'church'	si-jangu	'churches'
háhae	'leprosy'		

5.3.2.4 The lexically determined class M-Class *y-/s-*

There are a few Gender II nouns from morphological class *y-*/*s-* (see (15)). The choice of these prefixes is lexically determined as pointed out in the analysis of the prefixes of the form *C-* discussed in Chapter III (Section 3.4.1).

(15)

Singular		Plural	
y-aŋ	'house'	s-aŋ	'houses'
y-alor	'soul'	s-alor	'souls'
y-on	'crocodile'	s-on	'crocodiles'

To summarise this section, Gender II is mostly semantically nonspecific. However, it is associated with some semantic contents, as it includes some nouns assigned to morphological classes *e-/su-* based on semantics. These nouns denote special humans, nuts, and paired entities. Here, rather than arguing that the whole gender is semantically based, it makes more sense to state that some specific semantic properties are associated with Gender II.

5.3.3 "Assemblages"/ "whole" and "production" in Gender III

Gender III is semantically heterogeneous and not amenable to a unique Aristotelian semantic feature. The semantic categories found in this gender are culture-specific. Although we cannot argue that every noun is assigned to this gender on semantic grounds, some generalisations can nonetheless be offered. I propose here that at a conceptual/abstract level the most general and most inclusive meanings for this gender relate to the concepts of "assemblages"/"whole" and "production", two of the notions also proposed in Sagna (2008). I will explain what these concepts mean as I discuss the semantic properties associated with the different morphological classes included with this gender.

5.3.3.1 Assemblages and production in M-Class *bu-/u-*

Nouns in morphological class *bu-/u-* include singularia tantum nouns, which take the singular prefix *bu-* but lack plural counterparts. Many of these nouns denote plants. The term plant is used here as a unique beginner, i.e. the most inclusive term in the taxonomy and includes 'trees', 'shrubs' and 'grass'. Of these, trees are the kinds of plants most often included in this morphological class.

Apart from three tree names (two of which are in Gender VIII and one in Gender II) all tree names, some of which are given in (16), are included in morphological class *bu-/u-*, sometimes referred to as the "class of trees".

Nouns denoting products derived from plants like medicinal concoctions are also found in the morphological class *bu-/u-* through a conceptual process of part-whole metonymic association. In other words, nouns denoting plants are polysemic and denote both the plant and the medicine derived from that plant. Only the singular forms are used to refer to medical extractions from these plants. For example, *bu-ffalah* 'Dialium guinense' refers to both the tree and any medicinal product derived from it.

(16)

Singular		Plural	
bú-bukkut	‘Detarium senegalensis’	ú-bukkut	‘Detarium senegalensis’
bi-bej	‘mangrove tree’	u-bej	‘mangrove trees’
bu-bah	‘baobab tree’	u-bah	‘baobab trees’
bu-ffalah	‘Dialium guinense’	u-ffalah	‘Dialium guinense’

Smaller plants found in this morphological class (see (17)) are mostly used for medicine, consumption or for some other purposes. They differ from plants in Gender V, which are predominantly not used to produce medicine. For example, *bu-saet* ‘Casia sieberiana’ and *bu-puta* ‘Casia occidentalis’ designate two small plants used to produce medicinal products. Thus, the classification of small plants in the *bu-*/*u-* morphological class is mainly based on their functional properties rather than their size when compared to trees.

(17)

Singular		Plural	
bu-as	‘Sandpaper fig’	u-as	‘Sandpaper figs’
bú-pandaŋ	‘Waltheria indica’	ú-pandaŋ	‘Waltheria indica’
bú-bubuay	‘Cephaelis peduncularis’	ú-bubuay	‘Cephaelis peduncularis’

A number of nouns from morphological class *bu-*/*u-* denote body parts (or parts of things). Semantically, we can divide these body parts into two subcategories. The first includes body parts with an extended flat surface (see (18)). The other category is illustrated in (19) and includes those that can be seen as assemblages, in the sense that they include other parts of the body. For example, *bu-tum* ‘mouth’ includes teeth and tongue, while *bú-ttoy* ‘bird’s tail’ is made of multiple feathers.

(18)

Singular		Plural	
bú-sol	‘back’	ú-sol	‘backs’
bu-hah	‘sole of foot’	u-hah	‘soles of feet’
bi-lefej	‘palm’	u-lefej	‘palms’

(19)

bu-tum	‘mouth’	u-tum	‘mouths’
bu-ul	‘face’	u-ul	‘faces’
bú-ttoy	‘bird’s tail’	ú-ttoy	‘birds’ tails’

Morphological class *bu-*/*u-* also includes nouns denoting bounded spaces with visible boundaries (Tendeng 2007). Some of these spaces, as illustrated in (20), are enclosures with an inside that is designed by humans for a specific purpose, e.g. to trap fish. These enclosures are generally fences made of assemblages of sticks.

(20)	Singular		Plural	
	bu-oy	‘dam to channel water and catch fish’	u-oy	‘dams’
	bí-ggiden	‘fish fence trap’	ú-ggiden	‘fish fence traps’
	bú-luŋ	‘mangrove swamp’	ú-luŋ	‘mangrove swamps’
	bi-it	‘rice fields’ (assemblage of plots)	u-it	‘rice fields’
	bu-hangen	‘fence/pant garden’	u-hangen	‘fence/pant gardens’

Mass nouns in this morphological class mostly denote viscous liquids or assembled leftovers, which are mainly obtained through purposeful assemblage. Medicinal products that are derived from parts of plants are found in this morphological class. Alcoholic drinks and most other liquids are either derived from trees or are assembled in some way.

(21)	Singular		Singular	
	bu-nuh	‘palm wine’	bu-kkaç	‘kind of plant-based alcoholic drink’
	bu-ppaŋ	‘fish fence trap’	bu-pos	‘dirty water from washed food’
	bú-lluh	‘dregs’	bu-hul	‘first wine from palm tree’
	bi-sih	‘poison’	bí-pi	‘opaque liquid’

All recorded artefacts found in this morphological are carved from plants or made from parts of plants. One of the most common characteristics that distinguish them from the artefacts found in other morphological classes is that they are either assemblages of wooden objects like those in (22) or they have an inside designed for a purpose. For example, a traditional (and now extinct) Eegimaa bed was made of sticks called *e-ra* ‘bed stick’/*si-ra* ‘bed sticks’. The assemblage of these bed sticks is what is referred to as *bu-ra* ‘bed’ using NCP *bu-*. Another example of artefacts in this morphological class is the ‘mortar’ and the ‘bowl’ in (23), which have an inside made to contain items. Once again, the name for an artefact can be the same as the name of the tree or it may be different. In any case, both are found in morphological class *bu-*/*u-*. For example, *bu-ssana* is polysemic: It is the term for both ‘silk-cotton tree’ and ‘dug-out canoe’, because dug-out canoes are generally carved from the silk cotton tree.

(22)	Singular		Singular	
	bu-ra	‘bed’	bu-ccaç	‘stretcher for corpses’
	bu-hangen	‘fence/pant garden’	bu-çag	‘stable?’

(23) bu-ssana ‘dug-out canoe’ bí-sigan ‘mortar’
bi-ril ‘bowl’ bí-hemum ‘pipe’

Abstract nouns in this morphological class include some like those in examples (24), which are associated with the meaning of “assemblages” since they require the involvement or the production of several entities. Other abstract nouns like those in (25) do not show any clear semantic motivations for their inclusion in morphological class *bu-*/*u-*.

(24)

Singular		Singular	
bú-alen	‘tax in rice’	bí-çet	‘deadly animal epidemic’
bú-kkanum	‘deeds’	bu-ffutor	‘association’

(25) bu-rokk ‘work bi-eb ‘hunger’
bu-toppo ‘deafness’ bu-roŋ ‘life’

The prefix pair *bu-*/*u-* can be also used as an augmentative marker to express enormous sizes for nouns from other genders as exemplified with two nouns denoting body parts in (26).

(26)

Singular		Augmentative	
é-fulum	‘backside’	bú-fulum	‘enormous backside’
é-ñundu	‘nose’	bú-ñundu	‘enormous nose’

The prefix *bu-* can also function unproductively as a collective marker for a few nouns to describe assemblages of entities of the same nature as those exemplified in (27).

(27)

Singular		Plural		Collectives	
ga-fal	‘hair’	u-fal	‘hair’	bú-fal	‘body/animal hair’
gá-ssit	‘feather’	ú-ssit	‘feathers’	bí-ssit	‘plumage’
e-ra	‘bed stick’	si-ra	‘bed sticks’	bu-ra	‘bed’

The remaining nouns of the pair *bu-*/*u-* morphological class, which may be put in a subcategory referred to as “other”, are nouns which could not easily be included in the semantic categories discussed above. The most interesting ones for our semantic categorisation are two nouns denoting animals. These are *bu-lun* ‘python’, the biggest snake in the environment where Eegimaa speakers live. It is included here probably because of its enormous size.

The other animal found in Morphological Class *bu-/u-* is *bu-yyan* 'heifer'. This is a domestic animal of high prestige. In Eegimaa traditional society, acquiring a heifer means increasing one's livestock, since it is expected that the heifer will produce other cows, which will in turn, contribute to expanding the owner's wealth. Thus, the classification of heifer in the morphological class relates to the domain of experience of production (of wealth in this case).

5.3.3.2 Lexically determined class in M-Class *b-/w-*

The morphological class *b-/w-* has very few nouns, and the use of its prefixes, which have the shape *C-*, is lexically determined. Their semantics relates to that of M-class *bu-/u-* discussed above. For example, the noun *b-aŋ* 'living room' in example (28) includes the meaning of a space designed by humans with an interior, as discussed for morphological class *bu-/u-*. The association of bound spaces discussed above with the notion of assemblages is also relevant to the expression of location. Three types of locatives are expressed in the Eegimaa noun class system, namely precise location, discussed in Section 5.3.9, location inside (see Section 5.3.10), and general location. General location is expressed in Gender III with M-class *b-/w-*. A general location is an area composed of many precise locations (expressed in Gender IX). Another way of saying this is that a general location is conceptually an assemblage of precise locations, hence the relevance of the concept of assemblage for this gender.

(28) b-aŋ 'living room' w-aŋ 'living rooms'
b-iñ 'area'

5.3.3.3 Diminutive collectives in M-Class *ba-/u-*

In Sagna (2008; 2012), I analysed the prefix pairs *bu-/u-* and *ba-/u-* as subclasses of the same traditional class 5. Here, they are treated as members of different M-classes from Gender III. The Gender III semantic properties of "assemblages" and also "enormous size", discussed above for M-class *bu-/u-*, are also found in M-class *ba-/u-*.

To understand the semantic properties associated with M-class *ba-/u-*, let us first discuss the most common uses of NCP *ba-*. In most contexts where NCP *ba-* appears as a nominal prefix, it functions as a diminutive collective marker, that is, as a collective marker which describes an assemblage of small entities. This is exemplified in (29) with naturally small entities. Here, the alternation of the prefix *ba-* with the singular and plural NCPs describes groups or piles of small things.

(29)

Singular		Plural		Collective	
e-hola	‘midge’	su-hola	‘midges’	ba-hola	‘midges’
ji-ttaja	‘firefinch’	mu-ttaja	‘firefinches’	ba-ttaja	‘flock of firefinches’
ji-ray	‘small fish’	mu-ray	‘small fish’	ba-ray	‘pile of small fish’

NCP *ba-* can also be used to derive diminutive collective meaning for entities that are not naturally small. Here, the entities must be conceived of as small or presented as small first, using the diminutive prefixes *ju-*/*mu-*, before the prefix *ba-* can be used to express diminutive collective meaning. Example (30) shows two nouns in their normal singular-plural forms, with the diminutive prefixes *ju-*/*mu-* first, and then with the diminutive collective *ba-*, where the latter describes an assemblage of small entities.

(30)

Singular		Plural		Collective	
fi-ppet	‘piece of meat’	gu-ppet	‘pieces of meat’	ba-ppet	‘pile of small pieces of meat’
ji-ppet	‘small piece of meat’	mi-ppet	‘small pieces of meat’		
á-muse	‘teacher’	é-muse	‘teachers’	bá-muse	‘group of tiny teachers’
jú-muse	‘tiny teacher’	mú-muse	‘tiny teachers’		

M-class *ba-*/*u-* includes a few nouns which are involved in singular-plural alternations. Nouns from M-class *ba-*/*u-* can be divided into the several semantic fields discussed below, which exhibit the semantic property of assemblages.

NCP *ba-* is used with nouns that denote spreading infections. These infections are generally contagious and have symptoms that spread on part of the body or on all of it, as illustrated in (31).

(31) Spreading illness in M-class ba-/u-

bá-mur	‘measles’	ba-foj	‘eye conjunctivitis’
ba-kkollor	‘scabies’	ba-tingilit	‘mumps’
bá-humukkumuj	‘mumps’	ba-ffem	‘chickenpox’

Mass nouns which have also been recorded in M-class *ba-*/*u-* mostly denote thick or cohesive substances, some of which are of human manufacture (see example (32)).

(32) Mass substances in M-class ba-/u-

ba-raj	‘rice gruel’	ba-nneheteŋ	‘sticky rice’
ba-fira	‘hibiscus paste’	ba-tambaj	‘puree’

(33) ba-herut ‘chicken excrement’ ba-ññet ‘soot’
ba-tipan ‘glue’ bá-ttalittat ‘silk cotton’

Artifacts recorded in M-class *ba-*/*u-* include two of the biggest Eegimaa types of drums. The inclusion of these drums here suggests a relation to the expression of enormous size in this gender, also found in the expression of augmentatives for enormous size. The other artifacts include those that have shreds or collections/assemblages of things that have ‘laces’, and one container (*ba-et* ‘bag’).

(34) Artefacts in M-class ba-/u-
ba-han ‘big Eegimaa drum’ bá-ggar ‘big Foñi drum’

(35) bá-ajja ‘kind of necklace’ bá-lebum ‘dreadlocks’
ba-anjala ‘jewelry’ ba-et ‘bag’
ba-lis ‘shreds’

The few plants names in M-class *ba-*/*u-* produce very small fruits or nuts which tend to be seen or used in piles. The fruits/nuts have the same names as the plant. They are illustrated in (36).

(36) Plants in M-class ba-/u-

ba-sekkete	Kind of plant	bá-salum	Erythrina senegalensis
ba-ppom	Oxytenanthera abyssinica	ba-kkoléfulum	Opilia celtidifolia

The body parts recorded in M-class *ba-*/*u-* are presented in (37). Similar to those in M-class *bu-*/*u-*, body parts in *ba-*/*u-* tend to have an extended flat shape.

(37) Body parts in M-class ba-/u-
ba-giŋ ‘chest’ ba-jarah ‘animal gum’
ba-jaŋ ‘gum’ bá-raf ‘lungs’

There is a small semantic field of nouns which may be referred to as “collections”. It includes terms that denote human relations or collections of some other entities, all of which can be analysed as kinds of assemblages. They are illustrated in (38) with kin and close personal relations and in (39) with terms denoting entities that are naturally made of multiple elements. An example is ‘forest’, a natural assemblage of trees.

(38) Collections in M-class ba-/u-

ba-ttiay	'grouping of same sex siblings'	ba-somay	'grouping of all paternal aunties'
ba-ppalay	'friendship'	bá-llinay	'grouping of opposite sex siblings'

(39)

ba-añer	'whole of a ploughed plots'	bá-pur	'bad behaviour'
ba-ha	'forest'	ba-haç	'cleared areas for plant nursery'

The remaining nouns in M-class *ba-/u-* denote items that cannot easily be included in the semantic fields discussed above. The most notable nouns in this category are *ba-lliray* 'sea cow' and *ba-ppot* 'whale', which, similar to *bu-lun* 'python' from M-class *bu-/u-*, are the only animals to be included in this gender based on their enormous size.

The question that arises here is why most other big mamals, e.g. *é-ñih* 'elephant' and *e-pua* 'hippopotamus', are assigned to the default gender rather than Gender III. There is no clear answer to this question. However, given that the default gender is mostly semantically nonspecific, it may be that properties of animals are not in focus in Gender II.

There is only one noun of human denotation in Gender III, namely *bá-jur/sú-jur* 'young woman/women' (old enough to be married), which uses NCP *ba-*, while being the only noun of the *ba-/su-* M-class. Recall from the discussion in 5.3.2.1.1 that *bá-jur* 'young woman' is a full hybrid, that is, a hybrid noun in both the singular and the plural. This noun is analysed as an illustration of the culture-specific domain of experience of birth and production. The concept of domain of experience derives from Lakoff (1987: 93), who states that "if there is a domain of experience associated with A, then it is natural for entities in that domain of experience to be in the same category as A". During a traditional wedding, among Eegimaa people, a bride-to-be is metaphorically referred to as a 'heifer'. A heifer is, as pointed out above, a symbol of wealth among Eegimaa people, as it is seen as a means of expanding one's livestock. In the past, wealth was measured by the amount of rice a person had and by the number of their livestock. In such a context, a young woman's real value lay in her ability to give birth to children who would eventually contribute to increasing the production of rice. The metaphorical representation of a bride-to-be as a heifer is, consequently, a figurative way of expressing the conceptualisation of two entities as belonging to the same domain of experience (Tendeng 2007). The role of a young woman as a future mother is what is valued, and this is probably the origin of such a metaphor. If a woman fails to give birth, she is referred to as *e-motombo* 'barren

woman' and is thus classified among the special (marginal) humans of Gender II discussed in 5.3.2.1.1.

In short, the categorisation of entities in Gender III is another manifestation of how speakers conceptualise these entities. Such categorisation is, as D'Andrade (1995: 1) puts it, a reflection of how people "conceive of and think about the objects and events which make up their world".

5.3.4 Round-shaped entities and swarms in Gender IV

The semantic principles for the categorisation of entities in Gender IV include physical properties, notably round shape, and other culture-specific principles. The importance of shape as an fundamental criterion for the categorisation of objects was first established in Sagna (2008; 2012), using both naturalistic, elicited and experimental data. This is, to my knowledge, the first study which established shape as a fundamental principle of semantic categorisation in Atlantic noun class systems spoken in the Casamance area of Senegal. Gender IV also illustrates my argument that Eegimaa genders and their subordinate morphological classes and number subclasses are associated with semantic content. This gender has four morphological classes: In M-class *fu-/gu-* entities are categorised primarily based on round shape, and secondarily using size and consistency (flexibility in this case), which is not investigated here. The second morphological class is M-class *fa-/gu-*, where entities are categorised based on the cultural properties of the referents of the nouns. There are also M-class *fa-/ga-*, and M-class *f-/g-*, very small morphological classes whose semantic properties will be discussed below.

5.3.4.1 The encoding of round shape in M-Class *fu-/gu-*

The most important semantic parameter of categorisation of entities associated with M-class *fu-/gu-* is round shape; whenever an Eegimaa noun denotes an entity with a clear round shape it tends to be found in this morphological class. This does not mean that all nouns in this gender denote objects with a round shape. The most prototypically round entities are the three-dimensional (spherical) ones. They are always found in Gender IV, unless there is a cultural reason to include them elsewhere. This semantic categorisation process is also seen with loanwords, which are integrated into this morphological class because of their round shape.

Among the semantic fields that show the relevance of shape as a parameter of semantic categorisation are body parts. In Niger-Congo noun class systems, the distribution of body parts into various classes is often taken as evidence for the

lack of semantic motivation. The assumption here is that if there is no dedicated morphological class or gender for body parts, then one cannot really argue for a semantically-based classification. In Eegimaa, the distribution of body parts into different classes/genders is actually an indication of the semantic content associated with them (Sagna 2008; 2012). In other words, body parts will be found in the gender or morphological class with which some of their properties are associated. For example, Eegimaa human body parts, parts of other animates like animals, and also parts of inanimate entities like trees and vehicles are classified in the *fu-/gu-* M-class based on their round shape (see (40) and (41)). Body parts in this morphological class include the most prototypically round ones and also long, round and thick ones. In terms of consistency, body parts that are long and flexible, e.g. 'finger', will tend to be found in the *fu-/gu-* M-class. However, we can also find round but mostly rigid ones like 'thigh' in this class. Round shape also accounts for the inclusion of *gu-ffot* 'testicles', a plurale tantum noun, in this morphological class. The assignment of round body parts in the *fu-/gu-* M-class contrasts with those found in Gender V, which are generally flat, thin and mostly rigid.

(40) Body parts with round shape in fu-/gu-

fu-how	'head'	fu-la	'buttock'
fi-ssih	'finger/toe'	fu-boŋ	'thigh'
fí-rerum	'tongue'	fu-ttun	'penis'

(41)

fí-lej	'tale'	fu-ar	'root'
fu-hoŋol	'trunk/waist'	gu-ffot	'testicles'

The assignment of loanwords to Gender IV is motivated by their round shape. Sixteen percent of the 133 borrowed words analysed are assigned to the *fu-/gu-* M-class; 95% of these denote entities that show clear round shape. These loanwords, which include parts of vehicles, are directly integrated into the *fu-/gu-* M-class, without being temporarily assigned to the default class as a transitional stage (see (42) & (43)).

(42) French loanwords with round-shaped referents in M-Class fu-/gu-

fu-baloŋ	'ball'	fu-ru	'wheel'
fu-vvolaŋ	'steering wheel'	fi-serkal	'rim'

(43)

fu-cambraer	'inner tube'	fu-rakkor	'pipe'
fi-bbikk	'pen'	fi-kkirayoŋ	'pencil'

The importance of round shape as a semantic criterion of categorisation for nouns in the *fu-/gu-* M-class is also apparent with plants that are mainly characterised by their long, round stem, like those in example (44). It is also visible with tubers and loanwords from French denoting vegetables (See (45)).

(44) Plants and vegetables in M-Class fu-/gu-

fú-kkuhus	'tetracera potatoria'	fu-ttara	'bambou tree/stick'

(45)

fú-cuppome	'cabbage'	fu-kkokkombur	'cucumber'
fu-kkarot	'carrot'	fu-tamate	'tomato'
fu-tata	'patato'	fi-eh	'manioc'

All nouns denoting fruits in Eegimaa are found in the *fu-/gu-* M-class. This is why the singular form of this morphological class has been referred to as the class of fruits in some earlier works on Jóola languages. However, as pointed out in Sagna (2008; 2012), fruits illustrated in example (46), including loanwords denoting fruits, are assigned to this class primarily because of their round shape rather that than their nature as fruits. Fruits in this morphological class contrast with those in Gender II (M-Class *e-/su-*) because the latter denote nuts.

(46) Fruits in M-Class fu-/gu-

fu-mangu	'mango'	fi-rillo	'kind of fruit'
fi-llemuña	'lemon'	fu-mandarin	'mandarin'
fi-lellenja	'orange'	fu-nnana	'banana'

Abstract nouns denoting periods of time from the *fu-/gu-* M-class denote cyclic periods. They include nouns denoting the two main seasons of the year, the word for month/moon, the word for 'day' and terms for the traditional days of the week.[40] These periods of time are cyclic and are, as a result, conceived of as having an abstract round, circular property. Nouns denoting these periods of time are illustrated in example (47). Note that the word for 'year' belongs to the default Gender, which is mostly semantically unspecified.

40 This is another illustration of the tendency for subordinate terms to take the same noun class prefixes as the superordinate terms with which they are involved in a generic-specific taxonomic relation.

(47) Cyclic periods of time in M-Class fu-/gu-

fi-eñ	'month/moon'	fu-jam	'rainy season'
fu-nah	'day'	fu-kkuah	'third day of the week'
fí-yyay	'first day of the week'	fu-ccanamut	'fourth day of the week'

The kind of fish found in this morphological class includes fish having rounder shape as shown in (48), compared to those in Gender V, which are mainly of flat shape.

(48) Fish in M-Class fu-/gu-

fu-sabet	'brown bullhead'	fu-laç	'shark'
fí-hirih	'kind of fish'	fi-ŋŋeŋam	'kind of fish'
fú-hun	'kind of fish'	fi-men	'mud skipper'

Eegimaa artefacts found in the *fu-/gu-* M-class also tend to have round shape as their most important property (see (49)). Note that some of the artefacts in this example have a temporary arrangement like *fu-hay* 'circle formed by standing people' (usually for dancing), whereas objects like the bracelet are inherently round.

(49) Eegimaa artefacts in M-Class fu-/gu-

fí-liññah	'bracelet'	fu-gaŋ	'wheel'
fu-rogal	'kind of round artefact'	fu-ŋongot	'round artefact'
fu-laor	'rope'	fu-bokken	'ball of clay'
fu-hay	'circle formed by standing people'	fí-melep	'circle'

The expression of augmentative meaning in the *fu-/gu-* M-class is another indication of the importance of round shape as a criterion for the categorisation of entities denoted by nouns from Gender IV. As can be seen in example (50), nouns from other genders can use either of the singular or plural prefixes of the *fu-/gu-* M-class to express augmentative meaning with the additional connotation of round, thick or fat. So, an entity denoted by a noun taking NCPs *ga-* or *e-* can be conceptualised as round/fat by alternating these prefixes with NCP *fu-*.

(50)

Singular		Augmentative	
a-ññil	'child'	fi-ññil	'fat child'
e-joba	'dog'	fu-joba	'fat dog'
ga-ñen	'hand'	fi-ñen	'fat hand'
ga-hait	'paper'	fu-hait	'thick paper'

The data above shows that a noun class system of the Niger-Congo can encode shape. The importance of shape in noun class semantic assignment has been discussed in studies of Bantu (Denny & Creider 1986; Spitulnik 1989; Contini-Morava 1997; 2000) and Atlantic languages (Sagna 2008; 2012; Cobbinah 2013; Watson 2015). I argue that it is one of the clearest illustrations that languages like Eegimaa still retain a good level of semantically motivated categorisation in their noun class assignment.

5.3.4.2 Round shape and swarm collectives in M-Classes *fa-/gu-* & *fa-/ga-*

The semantic characteristics of M-class *fa-* are also illustrations of culture-specifically motivated semantic categorisation. The semantics associated with the prefix *fa-* partly includes round shape, which is a general semantic property of Gender IV, and the collectivity meaning for swarms discussed in detail below. Most nouns that take the prefix *fa-* are non-count nouns. (The few count nouns are found in morphological classes *fa-/gu-* and *fa-/ga-*). This prefix is used as a collective marker for certain types of insects, which I shall call "army insects", because they tend to live as a strong and aggressive colony in swarms. Examples are bees, wasps and different kinds of army ants like driver ants (Dorylus). These insects are characterised by their homogenous behavioural patterns: moving together, for nomadic ones, and attacking their prey together (see (51))

(51) Collective use of the prefix fa-

fa-aj	'swarm of bees'	fa-uj	'swarm of driver ants' (Dorylus)'
fá-il	'swarm of small red army ants'	fa-abut	'swarm of black ants'
fá-bangur	'swarm of locus'	fa-ttiga	'swarm of black army ants'
fa-nnon	'swarm of kind of army ants'	fa-ingilit	'swarm of wasp'

It is important to bear in mind that all nouns denoting these army insects have a singular and plural form deriving from other genders. For example, *f-aaj* 'swarm of bees' is realised as *y-aaj* 'bee' and *s-aaj* 'bees' in the singular and plural, respectively, while *fa-ttiga* 'swarm of black army ants' is realised *e-ttiga* 'black army ant' and *si-ttiga* 'black army ants'.

NCP *fa-* is unproductive; it does not take loanwords and cannot be used to form new lexemes. As pointed out earlier, it generally combines with non-count nouns, including some plant names. Only two recorded plant names are compatible with the prefix *fa-*. These plants may be referred to as 'stinging' plants.

One of them, *fa-ssonay* 'kind of grass', is a kind of grass with sharp leaves, which make small but painful lacerations on the human body. The second, *fa-ñumora or fa-gori* 'kind of thorny-stemmed plant', has claw-like thorns which grow in close proximity on its stem. These thorns also create small lacerations at different points of the body, creating a painful feeling comparable to the stinging of army insects. Thus, these plants are probably categorised using NCP *fa-* by analogy with army insects.

There is one noun denoting a ritual dance, *fa-ragir* 'kind of funeral dance', which is performed by women during a funeral, and may be loosely referred to as "swarm funeral dance". It is characterised by a homogenous back and forth synchronised movement, which is comparable to that of army insects moving together. Considering that Eegimaa people have a ritual (the *ga-ggaj* 'panther ritual'), which is performed to prevent a man from reincarnating into a cruel panther that would be a constant threat to their livestock, it could be that the *fa-ragir* dance was also originally created to capture a specific phenomenon whose meaning has been lost in the course of history. I propose that the classification of this dance with NCP *fa-* is motivated by family resemblance with the behaviour of army insects.

Most non-count nouns that take NCP *fa-* are mass or abstract nouns that denote entities characterised by their homogeneity. These entities are composed of homogenous substances, spaces, colours or behaviour. Note that the substances found here are not manmade. As the example in (52) shows, entities of this type can be things like 'smoke' and 'slippery surface', which have essentially homogenous properties. They can also be uniform things like 'respiration' or generally unpleasant patterns of behaviour such as 'clinginess' (see (53)).

(52) Collective use of the prefix fa-

fa-kkor	'smoke'	fá-huten	'permanent darkness'
fa-ttuj	'bottom side of loft (dark)'	fa-tulunjat	'slippery place'
fa-ñuget	'blackness'	fá-tuen	'whiteness'

(53)

fa-if	'respiration'	fa-hota	'clinginess'
fá-ine	'manliness'	fá-hat	'ungainliness'

Very few count nouns take NCP *fa-*. They are divided into two morphological classes, *fa-/ga-* and *fa-/gu-*, (see (54) and (55)).

(54)	Singular		Plural	
	fá-gur	'kind of animal'	gá-gur	'kind of animal'
	fá-landiŋ	'bright red tunic for kings'	gá-landiŋ	'bright red tunics for kings'
	fa-a	'Borassus fruit with fibrous pulp'	ga-a	'Borassus fruit with fibrous pulp'
	fá-gguh	'kind of evil supernatural being'	gá-gguh	'kind of evil supernatural being'
	fá-çil	'man's genitals'	gá-çil	'men's genitals'
	fa-ttam	'woman's genitals'	ga-ttam	'woman's genitals'

(55)	fa-tama	'navel'	gu-tama	'navels'
	fa-et	'thick tuft of hair at the end of a tail.	gu-et	'thick tuft of hair at the end of tail.

The count nouns in the M-class *fa-*/*gu-* (see (55)) denote entities having a round shape, thus showing aspects of the semantics of Gender IV. Nouns from the *fa-*/*ga-* M-class, like *fa-a* 'Borassus fruit with fibrous pulp', also have the roundness property. The reason for using NCP *fa-* in the singular for these nouns instead of *fu-* is unclear.

The semantics of the other nouns from the *fa-*/*ga-* M-class is harder to relate to round shape or army ants. These include *fá-lanfiŋ* 'bright red tunic for kings', which has a homogenous colour, and *fá-gur* 'kind of animal', whose inclusion this class is in all probability due to perceived similarity between the aggressive smell of its urine, which is difficult to remove from the skin, and the behaviour of swarm insects when they attack the body. This, I argue, is a categorisation based on human experience of entities in their environment. The semantic content of the last three count nouns of class *fa-*/*ga-* shown in example (54) (*fá-gguh* 'kind of evil supernatural being', *fá-çil* in the sense 'man's genitals' and *fa-ttam* in the sense of 'woman's genitals') is difficult to ascertain.

In summary, although some nouns taking NCP *fa-* have the property of round shape ascribed to Gender IV, this number subclass and the morphological classes in which it is found are mostly associated with culture-specific semantic categorisation. This is, as pointed earlier, a kind of categorisation "in terms of the various types of interactions that human beings carry out with the objects in their environment" (Craig 1986b).

5.3.4.3 Round shape in M-Class *f-*/*g-*

A fourth morphological class for Gender IV is *f-*/*g-*. This morphological class, which has a couple of nouns, namely, *f-ar*/*g-ar* 'stomach/stomachs' and *f-al*/*g-al*

'river', uses the criterion of round shape for the 'stomach' but less clearly for 'river'. It therefore has similar properties to M-class *fu-/gu-* discussed above.

5.3.5 Flat-shaped, wide and big-sized entities in Gender v

The physical properties of semantic categorisation associated with Gender v include flat shape, width and big size. These properties are linked to augmentative and derogatory meaning. Secondary semantic properties of categorisation include thinness and rigidity. Some nouns are assigned to Gender v based on culture-specific semantic properties. For example, augmentative meaning is expressed in this gender, and is associated with derogatory meaning and the meaning of weakness. I will show that these meanings can account for the inclusion of nouns of human denotation in this Gender.

Once again, it is important to bear in mind that the argument proposed here is not that all nouns in a gender are semantically classified, but that semantic properties are associated with individual genders. In the next sections I discuss the two morphological classes of Gender v that exhibit semantic properties: *ga-/u-* and *ga-/gu-*.

5.3.5.1 Flat shape, width and bid size M-Class *ga-/u-*

One of the semantic fields that clearly shows the importance of flat shape as a criterion for the semantic categorisation of entities is that of body parts. In Section 5.3.4 I showed that body parts with a round shape are assigned to Gender IV. This contrasts with classification of nouns denoting body parts that have a flat shape in Gender V. Body parts with a flat shape include parts of the human and the animal body exemplified in (56), parts of trees shown in (57), and vehicles as illustrated in (58).

(56)	ga-rab	'cheek'	gá-ssit	'feather'
	ga-lefel	'palm'	ga-pol	'skin'
	ga-uruh	'nail'	ga-ana	'pancreas'
(57)	ga-toj	'leaf'	ga-bes	'palm leaf/wing'
	ga-pal	'bark'	ga-bbob	'palm of the Borassus tree'
(58)	ga-vvitre	'windowpane'	ga-pparabrise	'pare-brise'
	gá-kkappo	'bonnet'	ga-ppulak	'number plate'

Loanwords in Gender v also show that entities can be semantically categorised in Eegimaa based on their flat shape. Of the 133 recorded loanword 30 (22.6%) are assigned to M-class *ga-/u-*. Eighty three percent of these loanwords have a flat shape and many of these objects are either rigid or thin (see (59)).

(59)

ga-kkart (fr)	'card'	ga-ppaspor (fr)	'passport'
gá-ppano (fr)	'board'	ga-pposter (fr)	'poster'
ga-bbaç (fr)	'tarpaulin'	gá-ffay (fr)	'sheet of paper'
ga-kkorijet (Eng?)	'sheet corrugated iron'	ga-hayit (wl)	'sheet of paper'

The classification of nouns denoting Eegimaa native artefacts illustrated in (60) in M-class *ga-/u-* shows that their categorisation is also based on the criterion of flatness.

(60)

ga-ppeh	'mat'	gá-bifum	'fan'
ga-bil	'sarong'	gá-ttar	'ribbon'
ga-babar	'plank'	ga-jandu	'ploughing shovel'

Fish with a flatter shape are assigned to M-class *ga-/u-* of Gender v. This includes *ga-tommal* 'sole', *ga-bindañ* 'kind of flat fish' and *ga-felej* 'Ethmalosa fimbriata', and contrasts with the classification of the roundest fish, e.g. *fu-laç* 'shark', *fu-sabet* 'catfish' in Gender iv.

M-class *ga-/u-* of Gender v also includes wide open spaces like clearings in forests, which may be conceptualised as flat. Examples are *ga-parandaŋ* 'glade', *ga-ffit* 'shore' and *ga-haŋ* 'clear area of the rice fields'.

Empty periods of time, characterised by inactivity in the community, are also assigned to M-class *ga-/u-* of Gender v, probably based on a metaphorical extension of the concept of flatness. This includes *ga-roboró* 'holiday', *ga-vvela* 'year with no pre-initiation' and *ga-jimandiŋ* 'sacred week of inactivity following the death of a member of the royal family'.

An interesting observation is that artifacts having a wide opening are assigned to this gender, indicating that the criterion for width, which often goes together with flatness, is also relevant. For example, an artefact like *ga-pomo* 'cooking pot of clay with wide opening' is assigned to M-class *ga-/u-*, unlike *e-bara* 'cooking pot of clay with smaller opening'. Other artefacts with a wide opening include *ga-tegel* 'basket', *ga-yeut* 'funnel-shaped basket cover', *ga-pamben* 'funnel' and *gá-ttito* 'fishing basket'.

M-class *ga-/u-* of Gender v is associated with big size. It is also the default augmentative gender in Eegimaa. Nouns from other classes can take prefixes *ga-/u-* to express big/abnormally big size, which often goes hand in hand with

the expression of derogatory meaning or indicates that the categorised entity is damaged or useless (See (61)).

(61)

fu-how	'head'	ga-how	'big/ugly head'
e-llame	'machete'	ga-llame	'big/bad/useless machete'
bu-tum	'mouth'	ga-tum	'big/ugly mouth'
fí-rerum	'tongue'	gá-rerum	'big/wide/ugly tongue'
é-otor	'car'	gá-otor	'big/ugly/useless car'

The idea of derogatory expression can be applied to some humans, e.g. *gá-ffannum* 'old person who has lost their physical and mental abilities' and *ga-yugum* 'lazy person'. These persons are metaphorically conceptualised as "impaired" and "useless", respectively. Derogatory expression is also used for humans as with *ga-jattanjattaŋ* 'tall and weak person'.

5.3.5.2 Flat and round-shaped entities in M-Class *ga-*/*gu-:* Conflicting semantic criteria

Only three nouns are found in M-class *ga-*/*gu-* of Gender v (See (62)). Two of these nouns, *ga-ñen* 'hand/arm' and *ga-at* 'foot/leg', are polysemous, denoting flat entities with one of their senses ('hand' and 'foot') and round-shaped ones with their other sense ('arm' and 'leg'). The third noun *ga-nnu* 'ear' denotes a round-shaped entity which is also flat. In the singular, these nouns are assigned to class *ga-* with other flat-shaped entities, suggesting that flatness is the most important criterion here. In the plural, however, these same body part-denoting nouns take the prefix *gu-*. Like all nouns denoting round entities. I have observed some speakers realising the plural of 'ear' as *u-nnu* 'ears', suggesting that their criteria of flatness is applied both in the singular and the plural. However, this is rare.

(62) Body parts showing conflicting semantic criteria

ga-ñen	'hand/arm'	gu-ñen	'hand/arm'
ga-at	'foot/leg'	gu-at	'feet/legs
ga-nnu	'ear'	gu-nnu	'ears'

5.3.6 Semantic properties of augmentative expressions

Augmentative expressions can be summarised as follows. Nouns from any gender can be shifted to Gender v (see (63)), to express big size (also abnormally big)/ augmentative meaning with the additional meaning of 'bad'/'useless' depending

on the context. M-class *fu-*/*u-* from Gender IV is also used to express augmentatives (64), but with the additional connotation of roundness or fatness. Finally, the third type of augmentative formed in Gender III expresses enormous size (65).

(63) fu-how 'head' ga-how 'big/ugly head'

(64) ga-hayit (wl) 'sheet of paper' fu-hayit (wl) 'thick sheet of paper'

(65) fu-how 'head' bu-how 'enormous head'

Another way of determining the importance of shape and augmentative expressions as a criterion for semantic categorisation is by using the pro-form *-nde* 'thingamajig'. This pro-form can attach to all noun class prefixes, as a dummy stem. When it combines with prefixes *fu-*/*u-* from Gender IV as in *fi-nde* 'round thingamajig' it denotes a round, thick and fat entity. With prefixes *ga-*/*u-* from Gender V (e.g. flat *ga-nde* 'thingamajig') it would primarily denote a flat, thin and/or wide entity, but also augmentative and derogatory expressions, unless the context leads to another interpretation. Finally, *bi-nde* 'tree/enormous thingamajig' can refer to trees, but also enormous size, unless another specific meaning is suggested by the context.

5.3.7 Evaluative morphology – small things and diminutives in Gender VI

Semantically, Gender VI is primarily associated with small size and includes nouns whose referents are naturally small. This gender has two main morphological classes, namely *ju-*/*mu-*, used to form diminutives, and *ja-*, which has one recorded lexical noun, in which it is used in the expression of personification and attenuation.

5.3.7.1 Expression of diminutives in M-Class ju-/mu-

The nouns found M-class *ju-*/*mu-* are intrinsic members of Gender VI, i.e. they do not result from diminutive formation. The referents of these nouns (see (66)), are small in essence, or have not yet matured, like the small Borassus tree.

(66)

Singular		Plural	
ji-hiç	'spur-winged plover'	mi-hiç	'spur-winged plovers'
ji-iba	'knife'	mi-iba	'knives'
ji-rekku	'frog'	mi-rekku	'frogs'
ji-rafay	'small Borassus tree'	mu-rafay	'small Borassus trees'

There is an *evaluative rule* (Stump 1993) of diminutive formation whereby nouns from other genders shift to M-class *ju-*/*mu-* of Gender VI to express diminution, endearment and also in some contexts contempt. Unlike Bantu languages, where the expression 'diminutive meaning' often involves the combination of an "inherent" nominal prefix with the diminutive markers (class 12/13 *ka-*/*tu-*), Eegimaa diminutives are formed by nominal prefix substitution (see (67)). All Eegimaa countable nouns combine with prefixes *ju-* or *mu-* in the singular and plural, respectively, to form diminutive expressions. Non-count mass nouns can also take these prefixes to refer to a small quantity extracted from a mass substance, as in *jú-hum* 'small quantity of honey' from *mú-hum* 'honey'.

(67)

Singular		Diminutive singular	
bá-jur	'young woman'	jú-jur	'small girl'
á-muse	'teacher'	jú-muse	'small/insignificant teacher'
y-aŋ	'house'	j-aŋ	'small house'
e-soŋ	'mad person'	ju-soŋ	'little idiot'

The issue of whether evaluative morphological processes, like the diminutive and augmentative formation are inflectional or derivational are issues of interest in typology and theoretical morphology. It is often argued that diminutives are examples of derivational processes in African noun class systems (e.g. Mufwene 1980 253) because diminutive formation involves change of morphological class and gender (see (68) & (69)) . The examples show a clear shift in gender with the substitution of the nominal prefix *e-* by the singular diminutive NCP *ju-*, and also a change in agreement, since the agreement of the resulting diminutive is Gender VI instead of II.

(68) The noun 'pig' in its original gender

e-humba	yayu	é-ggal-e
CLe-pig(II.SG)	II.SG.DEF	II.SG-go.pass-CPL

'The pig has gone past.'

(69) Diminutivisation of the noun 'pig'

ju-humba	jaju	jí-ggal-e
CLju-pig(VI.SG)	VI.SG.DEF	VI.SG-go.pass-CPL

'The small pig has gone pass.'

I argue that diminutive formation in Eegimaa is inflectional, based on the evaluative rules proposed in Stump (1993: 12). Diminutivisation involves a change in the semantics of the base. However, although there is a clear shift in morpholog-

ical class and gender with the formation of Eegimaa diminutives, the evaluative rules preserve the morphosyntactic feature specification of number. Moreover, diminutive formation does not change the word class of the base noun. It should be pointed out that the Eegimaa rule of diminutive formation is a regular one, which applies to all nouns in the language except abstract nouns that cannot be deminutivised due to selectional restrictions.

There are two nouns that take the Gender VI singular prefix *ju-* but whose plural markers are not *mu-*: *jí-çil*/*gú-çil* 'eye/-s' and *ji-ggaj*/*si-ggaj* 'panther/s'. The explanation for these apparent exceptions is that *jí-çil* 'eye' is conceived of as a small a fragile entity in the singular, but in the plural, it is categorised as a round object and takes the plural NCP *gu-* from Gender IV, like other nouns denoting round objects. Recall from Chapter IV (Section 3.5.3.8) that *jí-çil*/*gú-çil* 'eye/-s' is the only noun from Inquorate Gender VI/IV, which triggers agreement in Genders VI and IV in the singular and the plural, respectively. This is another instance of what I referred to as multiple morphosyntactic classification, which reflects semantic categorisation principles.

As for 'panther', its morphological classification among small things in the singular can only be viewed as a euphemism designed to figuratively tame such a dangerous animal by conceptually representing it as small.[41] The 'fascination' about diminishing the impact of the panther among Eegimaa people accounts for the existence the *ga-ggaj* ritual, which may be glossed the 'panther ritual'. This ritual, also discussed earlier, is performed during the funeral to prevent the deceased man from reincarnating as a cruel panther. The categorisation of 'panther' is also another case of multiple classification and categorisation, but the multiplicity in the classification is only applicable at the level of morphology with the use of prefixes *ji-* and *si-* from Genders VI and II respectively.

5.3.7.2 Collectivity & personification in M-Class ja-

Two semantic properties are associated with the use of NCP *ja-*, collectivity and personification. As a collective marker, *ja-* is found in two nouns, *ja-mmeŋ* 'crowd' and *ja-açer* 'ground rice', which can also combine with the plural prefix *mu-*. The noun *ja-mmeŋ* 'crowd' can be seen as a lexical collective since its stem can occur only with the prefix *ja-*, denoting an entity that is by definition composed of a multitude of elements. The noun stem *-açer* 'ground rice' has the singular form *ga-açer* 'grain of ground rice' and the plural form *u-açer* 'grains of ground rice'. It

41 Eegimaa is not the only noun class language where this kind of Euphemism exists. The euphemism argument was first made in Contini-Morava (1997) for the Swahili noun *ki-faru* 'rhinoceros'.

combines with the prefix *ja-* to express collective meaning as in *ja-açer* 'ground rice' and with the prefix *mu-* as in *mu-açer* 'a small portion of ground rice' to express attenuation.

The other function of the prefix *ja-* is as a marker of personification for nouns denoting non-human entities as in *ja-ttaja* 'firefinch personified'. Nouns denoting personified entities trigger Gender I singular agreement (see discussion in Gender I Section 5.3.1). But I consider this to be a pragmatic use of this prefix. In summary, the prefix *ja-* is generally used to express semantic/pragmatic collective meaning.

5.3.7.3 Diminutive plurals and body masses in subclass Class mu-

In addition to count nouns in the *ju-/mu-* morphological class, which denote small entities, the plural prefix *mu-* attaches to non-count nouns that denote categories of abstract nouns and liquids. Abstract nouns found in this plural subclass (see (70)) generally denote inherent or natural characteristics of entities ((Sagna 2008) or properties, as argued in Seck (2002)).

(70) Abstract nouns with nouns in subclass class mu-

mi-ñeh	'sharpness'	mí-pin	'dexterity'
mu-ssay	'witchcraft'	mu-uet	'supernatural power'
mu-jah	'intelligence'	mí-ppim	'blindness'
mi-ŋiŋ	'hostility'	mú-ssum	'good taste/kindness'

Mass nouns from the subclass *mu-* are generally body masses and non-alcoholic liquids, as exemplified in (71). There is no sharp semantic category distinction between mass substances in Gender III and those in this gender, but we can generalise that the referents of the mass nouns in subclass class *mu-* are masses from the human or animal bodies. These mass substances are not assembled, as those of Gender III tend to be. The other category of liquids found in the *mu-* subclass is that of steam-distilled product like oils. Note that mass nouns taking NCP *mu-* are compatible with the prefix *ju-* only in the expression of diminutive to indicate the individuation of mass as in *jú-hum* 'a little bit of honey' from *mú-hum* 'honey'.

(71) Mass nouns with nouns in subclass mu-

mu-fat	'fat'	mí-i	'milk'
mu-kkuh	'murrow'	mu-ffu	'tears'
mú-ppun	'pus'	mi-il	'breast milk'

(72) mi-çir 'myrrh' mi-ita 'palm oil'
mú-hum 'honey'

Nouns in morphological subclass class *ma-* illustrated in (73) are generally abstract nouns which also refer to inherent properties of entities. The one instance where the prefix *ma-* combines with a count noun is *ma-fos* 'grass', where it functions as a collective marker. In fact, this is the only instance where it is used to express collective meaning.

(73) Abstract nouns with nouns in M-class ma-

ma-agen	'truth'	ma-ssume	'good part/that which is good.'
ma-ssikko	'deep part'	ma-lofe	'proximity/close part'
ma-supe	'hot part'	ma-pule	'rot/rotten part'

5.3.8 Economy and social organisation in Gender VII

Nouns in this gender include those that essentially denote entities with high economic value like 'plots of rice fields' and others that have social significance in traditional Eegimaa society. This accounts for the label "economy and social organisation class" (Sagna 2008), originally borrowed from Tendeng (2007), which relates to Denny's argument that social interactions can account for the culture-bound classification of entities (Denny 1976). Eegimaa Gender VII is semantically fully culture-specific and cannot take loanwords. The nouns in this gender are distributed over the morphological classes *ñu-*/*u-*, *ña-* and *ñ-*.

5.3.8.1 Economy and social organisation in M-Class *ñu-*/*u-*

Nouns that denote entities fundamental to Eegimaa speakers' economic organisation are found in M-class *ñu-*/*u-*. The referents of these nouns, (see (74)), are the most valued properties of Eegimaa traditional economy.

(74)

Singular		Plural	
ñi-hin	'Plot of rice field'	u-hin	'Plots of rice fields'
ñí-it	'palm oil tree'	ú-it	'palm oil trees'
ñu-vvul	'Borassus palm tree'	u-vvul	'Borassus palm trees'

Wet rice cultivation is at the heart of Eegimaa people's life and their social organisation, as it is for other Jóola people and the other people of the Casamance. Every Eegimaa person inherits a plot of rice fields, which ensures their independence and daily maintenance. In traditional Eegimaa society, wealth is measured primarily by the amount of rice that one accumulates through years of hard work. Ownership and the right to exploit plots of rice fields is often at the centre of

conflict, as it is for the palm oil tree and the Borassus palm tree. These trees have high economic significance because every part of them is used for different purposes. For example, the leaves of the oil palm trees are used to make fences and brooms, while its nuts are used to produce palm oil. Palm wine is extracted from the oil palm tree, and the stems are carved into laths to make house frames. The Borassus palm tree is valued because its leaves are used to make mats and most baskets, among other artefacts, and its stems are carved to make the best and most durable laths for house frames. There are rules of ownership for these palm trees, which represent prized property and which, like plots of rice fields, can be the source of incessant conflict. The argument proposed here is that the economic significance of these entities has led to their categorisation into the same domain of experience of economy and social organisation.

The semantic motivation for the categorisation of other nouns in this morphological class, illustrated in (75), is hard to determine synchronically. However, the observation that can be made here is that these nouns refer to negative and sometimes painful experiences, some of which have a clear social relevance rather than economic value.

(75)

Singular		Plural	
ñu-hul	'funeral'	u-hul	'funerals'
ñu-ssu	'shame'	-	-
ñu-how	'envy'	-	-
ñu-ttot	'cold weather'	-	-
ñu-hon	'filth'	-	-

The last category of nouns in M-Class *ñu-*/*u-* denotes the artifacts illustrated in (76), but no clear semantic motivation for their categorisations can be discerned here.

(76)

Singular		Plural	
ñi-ssel	'chain'	u-ssel	'chains'
ñi-hap	'kind of artefact'		
ñi-jjog	'tongs'		

5.3.8.2 Social interactions in M-Class *ña-*

Morphological class *ña-* has only non-count nouns (see (77) & (78)), and includes some of the semantic properties of Gender VII, namely, social interactions and negative experiences, at least for some nouns, as shown in (77). As can be seen in these examples, some are related to painful experiences.

(77)	ña-haw	'begging'	ña-kkot	'purification ritual for murderer.'
	ña-mbaf	'base sell of plot of rice fields'	ña-rum	'syphilis'
(78)	ña-mmica	'kind of rice fields plant with sharp stem'	ña-tiñ	'pain'

Finally, only two body part nouns are found in morphological class *ñ-*: *ñ-ondoŋ* 'back of the neck (between the scull and the neck)' and *ñ-aagir* 'back of the knee'. The reason why these nouns are found in this gender is unclear, but both refer to the back of an articulation.

In short Gender VII is mostly a culture-specific gender. The inclusion of many nouns in this gender relates to economy and social interaction. There are, however, other nouns for which there is no clear cultural semantic properties motivating their inclusion in this gender.

5.3.9 Precise location in Gender VIII

Gender VIII is the locative gender, which expresses precise location. There are only three recorded lexical nouns in this gender, and they are all singularia tanta: *ti-nah* 'sun/time', *ti-nahurab* 'dawn', and *t-iñ* 'precise place'. The polysemy of the noun *ti-nah* 'sun/time' is a good illustration of the meaning of 'precise place'. This noun denotes a physical entity 'the sun', whose movement between precise points is used as an indicator of precise time reference among Eegimaa people. Precise location contrasts with general location expressed in Gender VIII, which, as pointed out in Section 5.3.3, is conceptualised as an assemblage of many precise places.

5.3.10 Location inside in Gender IX

As pointed out in Section 3.5.3.11, Gender IX is a locative gender, which expresses location inside a place, e.g. a room, a container or any other place with an inside. The nouns *d-iñ* 'place inside' is the only lexical noun found in this locative gender, but its meaning can also be seen with the adverbial *d-o* 'inside'.

5.3.11 Temporal location in Gender X

Gender X expresses temporal location, that is, the time at which an event is located. As argued in 3.5.3.12, it includes no lexical nouns but appears only as a

marker of agreement in some targets, as with the quantifier *nanonan* 'anytime' and with the pronoun *n-o* 'then'.

5.3.12 Implications for semantic categorisation in noun class systems

Of the principles of semantic categorisation discussed in the chapter, physical properties such as shape and size are the most commonly reported in Jóola and other languages related to Eegimaa. The role of shape has also been reported in Kujireray (Watson 2015) and in Baïnounk Gubëeher (Cobbinah 2013), and was previously reported in Bantu languages. Size, and its role in evaluative morphology, is also a widely reported principle of categorisation described in the formation of diminutive and augmentative expressions across African noun class systems (Di Garbo 2014). Thus, physical properties, which are said to be universal principles of classification in nominal classification systems, would be important for a historical study of the principles used for the semantic categorisation of entities in noun class systems.

The discussion above showed that, in addition to physical properties, culture-specific principles of categorisation are also at play in Eegimaa, as they are cross-linguistically (Adams & Conklin 1973; Denny 1976; Craig 1986a; Senft 2000; Aikhenvald 2000). These principles can override physical properties. For example, the categorisation of trees together with entities of high economic value such as plots of rice fields shows that entities can be conceptualised and categorised based on their importance in speakers' lives rather than their physical properties. The categorisation of special humans in Gender II and those conceived of as "weak/useless" reveals that social factors also play a role in the Eegimaa categorisation system. Culture-specific principles of semantic categorisation show that a people's experience and world view have an effect on the way they categorise entities in their environment.

Finally, the multiple morphosyntactic and semantic classification of hybrid nouns like *bá-jur* 'young woman' shows that physical properties and culture-specific criteria can be employed concurrently for the categorisation of the same entity. In this specific instance, the production of wealth and the humanness of the young woman account for her simultaneous categorisation among humans and among entities that are fundamental to the production of wealth.

5.4 Conclusion

In this chapter, I have investigated the semantic properties underlying the classification of nouns in Eegimaa. I argued that genders and their morphological

classes are associated with semantic content. Rather than arguing that all nouns in a gender are classified semantically based on a single common denominator, I argued that in many ways the grammatical classification of nouns reflects a semantic categorisation of entities they denote. The argument is not that all nouns in a gender or morphological class are classified semantically. Rather, I demonstrate that individual genders and morphological classes are associated with semantic content. For example, round shape is associated with Gender IV. When a borrowed entity exhibits prototypical characteristics of such semantic content, it is assigned to that gender. This accounts for the classification of nouns like 'football', which denote entities with globular shape into Gender IV. In Eegimaa, as previously argued in Sagna (2012), both the physical and the culture-specific properties of entities can play a role in their semantic categorisation. Shape-based classification is an example of categorisation based on physical properties. An example of culture-specific semantic categorisation is the classification of nouns denoting special humans into Gender II and also "ordinary" humans from Gender I into semantically-based morphological classes expressing kinship and identity groups. A final note is that, although it cannot be argued that we are dealing with a fully semantically-based system of nominal classification, the examination of the semantics of the Eegimaa noun class system shows that there is a far greater extent of semantics at play than is usually assumed in the description of Niger-Congo noun class systems.

6 Semantics of overt verb classes

6.1 Introduction

In Chapter IV, I showed that non-finite verbs are assigned to several lexically determined morphological classes using the same linguistic means as nouns, namely noun class prefixes. Since there is, as demonstrated in Chapter V, a good degree of semantic motivations underlying the categorisation of entities denoted by nouns, the question that arises here is whether events that verbs denote are semantically categorised. If so, what are the underlying principles of such semantic categorisation, and does the use of the same classificatory devices suggest parallels between the nominal and verbal domains? In this chapter, I show that some overt verb classes have clearer semantic motivations than others, and that events that verbs describe are generally assigned to culture-specific categories which reflect speakers' experience of their world.[42] Following Sagna (2008), I argue that some collective and plural NCPs are used as pluractional markers, i.e. markers of a multiplicity of actions and events. One of the key arguments is that there are parallels between the semantic categorisation of entities in the nominal domain and that of events in the verbal domain, generally based on the feature of boundedness. The Eegimaa pluractional expressions are investigated from the perspective of the typological literature on pluractionality (Newman 1980; 1990; Mithun 1988; Lasersohn 1995; Corbett 2000; Cabredo Hofherr & Laca 2012a).

This chapter is composed of two main parts. Section 6.2 provides a background of theoretical concepts used to account for the categorisation of events using NCPs. This section also includes a discussion of lexical aspect, where it is shown that the choice of NCPs as morphological markers of verb classes is not directly linked to lexical aspect/aktionsart type. Note, however, that some features of lexical aspect play a role in NCP alternations for the expression of event delimitation studied in the next chapter. Finally, a discussion of the relevant Atlantic literature on the semantic basis underlying the categorisation of events is also included in this section. Section 6.3 provides a detailed examination of the semantic properties of each overt verb class and an investigation of verbal plurality marked on non-finite verbs with NCPs. For each overt verb class, I discuss the semantic parallels between the nominal and verbal domains wherever relevant. As with the noun class semantics, the basic assumption is that overt verb

42 In Chapter VII I argue that when more than one noun class prefix is attested with one and the same verb stem, the choice of noun class prefix is often based on transitivity hierarchy distinctions.

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classes are associated with semantic content. For example, overt verb class *ja-* is associated with contact and force and whenever these properties are to be expressed, NCP *ja-* must be used. This also means that not every verb in a class will exhibit semantic properties of that class.

6.2 Background

6.2.1 Overt verb classes as conceptual categories

The account of the overt classification of non-finite verbs and the corresponding semantic categorisation of events they refer to is mainly based on the notions of *conceptualisation* or *construal*, *categorisation*, *domain*, and *image schemas* taken from Cognitive Linguistics (Fillmore 1982; 1992; Lakoff 1987; Langacker 1987; Clausner & Croft 1999). Events which verbs denote are viewed here as concepts, that is, the basic units of mental representation. These events can be construed as related based on perceived common properties and are grouped into categories based on speakers' experience of the world. The categories of events are characterised relative to domains,[43] which "represent highly organised background knowledge against which concepts may be profiled" (Clausner & Croft 1999: 13). This implies that a category of events in such a categorisation system is largely culture-specific. Image schemas, on the other hand, are a "subtype of domain" and may be defined as "basic 'abstract' structures that recur in [humans'] construal of the world" (Clausner & Croft 1999). Some of the image schemas proposed by Clausner and Croft are used in this chapter to account for the classification of verbs as a reflection of event categorisation.

The generalisations proposed here are based on examining the common properties of events that verbs in a given non-finite overt verb class denote, and how they differ from those of other classes. It is thus argued here that some background knowledge of Eegimaa speakers' experience is essential for understanding the underlying semantic motivations for the overt classification of verbs and the corresponding categorisation of events. A brief example may help to illustrate the relevance of the above concepts to the Eegimaa overt verb classification. The non-finite verbs *ja-baloŋ* 'to play/playing football' and *ja-bbut* 'to fish/fishing with a fishing rod' describe different kinds of activities and can be viewed as different concepts. However, the use of the prefix *ja-* as a non-finite verb marker means that

43 A domain may also be referred to as a *frame* (Fillmore 1982; 1992), a *base* (Langacker 1987), or an *Idealised Cognitive Model* (Lakoff 1987).

they are members of the same morphological class, and construed as events of the same conceptual category, as will be shown in Section 6.3.5. These events are conceptualised as related and are profiled in a domain or image schema labelled *contact and force* (Clausner & Croft 1999). The semantics of the different Eegimaa event categories is examined in the next section. As pointed out earlier, overt verb classes differ in the number of class members they have. They also differ in the degree of transparency of the semantic principles underlying their categorisation.

In the description of expressions of multiplicity of actions and events I use the terms *event plurality*, *verbal plurality*, and *pluractionality*. In accordance with Cabredo Hofherr and Laca (2012b: 1), these terms must be distinguished as follows. Event plurality refers to "any linguistic means of expressing multiplicity of events, be they verbal, adverbial, or adnominal markers". Verbal plurality is used "more narrowly for event plurality marked on the verb", while pluractional markers are markers of verbal plurality (Newman 1980; 1990). The next issue to address before investigating the individual overt verb classes is whether Eegimaa verb classification and event categorisation are related to lexical aspect types.

6.2.2 Does lexical aspect/aktionsart influence the choice of NCPs on verbs?

To establish whether lexical aspect plays a role in the choice of NCPs as markers of overt verb classes I use the standard tests for the classification of verbs into aspectual classes. Aspect, used in this sense, refers to the temporal organisation of situations. The temporal organisation of situations comprises two independent parts, referred to as 'viewpoint' and 'situation types' (Sasse 2002). Viewpoint aspect refers to morphological distinctions such as perfective and imperfective. Unlike viewpoint aspect, situation types, which are relevant to our present discussion, do not normally have morphological inflectional marking and refer to the inherent temporal characteristics of verbs. The classification of verbs according to their inherent temporal characteristics is what is commonly referred to as lexical aspect or aktionsart. The tests for lexical aspect are applied cross-linguistically to distinguish between stative and dynamic verbs and telic (bounded) and atelic (unbounded) verbs etc. (Vendler 1967; Dowty 1979; Smith 1991; Croft 2012; Van Valin & LaPolla 1997). I will use these tests to determine whether the classification of verbs according to the classes of states, activities, accomplishments, semelfactive or achievements (Smith 1991) plays a role in the classification of non-finite verbs. Following Smith (1991), five situation types are assumed universally to test for the internal structure of verbs. Lexical classes of verb can be distinguished using these tests (see examples (1) and (2)), which are based on binary features, as shown in Table 21 below, taken from Smith (1991).

Table 21: Features of the situation types.

Situations	static	durative	telic
States	[+]	[+]	[–]
Activities	[–]	[+]	[–]
Accomplishments	[–]	[+]	[+]
Semelfactive	[–]	[–]	[–]
Achievement	[–]	[–]	[+]

Aspectual classes are distinguished from one another based on the presence or absence of the features of the situation types presented in Table 21. We can distinguish dynamic (activity, accomplishment, achievement and semelfactive) and non-dynamic verbs (stative). Within the class of dynamic verbs, the feature 'durative' distinguishes activity and accomplishment verbs (processes) from semelfactive and achievement verbs, which are punctual. The feature 'telic' distinguishes verbs that include a natural endpoint as part of their meaning (accomplishment and achievement) from those that do not have an endpoint (activities and semelfactives). Verbs, as pointed out by Van Valin and LaPolla (1997), may have different interpretations depending on the sentence they occur in. As it is beyond the scope of this chapter to provide a thorough analysis of the lexical aspect classification of Eegimaa, only the basic aspectual classes of Eegimaa verbs are investigated. Our task here is to establish whether the classification of verbs into overt classes using NCPs mirrors the classification of verbs into Vendlerian classes, for example, whether activity verbs tend to combine with specific NCPs, which are different from those that attach to accomplishments.

Table 22 shows that there is no one-to-one match between the morphological class of verbs and their aspectual type.

Table 22: NCPs combinations with verbs from different aspectual types.

Situations	Verb	NCP	Gloss
States	mu-jah	mu-	'to be clever'
	ba-reor	ba-	'to be short'
	é-jjuh	e-	'to be red'
Activities	ma-boy	ma-	'to defecate/defecating'
	ja-baloŋ	ja-	'to play football'
	ba-ah	ba-	'to weed'

Table 22 (continued)

Situations	Verb	NCP	Gloss
Accomplishments	e-tiñ	e-	'to eat'
	e-ttep	e-	'to build'
	é-li	e-	'to wake up'
Achievement	é-tallo	e-	'to realise'
	e-nnom	e-	'to buy'
	e-moj	e-	'to dive'
Semelfactive	má-lumo	ma	'to cough'
	é-ttesulo	e-	'to sneeze'
	é-ñagg	e-	'to jump'

Table 22 shows that no prefix is restricted to a specific aspectual type. For example, NCP *ba-* is found among stative and activity verbs, while NCP *ma-* is found with activity and semelfactive verbs. Finally, NCP *e-* is found with almost all the aspectual classes. The examples in the table do seem to suggest that accomplishment and achievement verbs only take NCP *e-*.

The situation is, however, more complex than it seems, because most verbs int these groups are also compatible with other NCPs. For example, *fi-tiñ* 'to eat' and *ga-ttep* 'to build' (see (2)) are alternative forms of two of the accomplishment verbs in

These forms tend to be used in atelic constructions, while the NCP *e-* tends to be preferred in in telic constructions as in (1). This is also true for achievement verbs like *e-nnom* 'to buy' and *e-moj* 'to dive', which, in atelic contexts, appear as *fu-nnom* 'to buy' and *ja-moj* 'to dive'. The citation forms of these verbs are with the NCPs *ja-*, *fu-*, *ga-* and *fi-*, i.e. prefixes other than NCP *e-*. As will be shown in Chapter VII, the '*take X time to do Y*' aktionsart test shows that NCP *e-* is preferred with telic expressions, which are defining features of accomplishment and achievement verbs.

(1)	n-a-kkan	to	sí-mit	sú-uba	bi	e-tt-ep
	REAL-I.3SG-do	there	CLsu-year(II.PL)	II.PL-two	PREP	CLe-build
	y-aŋ		yayu			
	CLe-house(II.SG)		II.SG.DEF			
	'S/he took two years to build the house.'					

(2)	??n-a-kkan	to	sí-mit	sú-uba	bi	*ga-ttep*
	PEAL-I.3SG-do	there	CLsu-year(II.PL)	II.PL- two	PREP	CLga-build
	yaŋ		yayu			
	CLy-house(II.SG)		II.SG.DEF			
	'S/he took two years to build the house.'					

The crucial point to bear in mind at this point is that Vendlerian aspectual types cannot account for the use of different NCPs for the classification of non-finite verbs. In the next chapter, however, I will show that lexical aspectual features such as boundedness and telicity play an important role in the alternation of NCPs to mark event delimitation.

6.2.3 Previous studies on the semantics of overt verb classes in Atlantic

As shown in chapter IV, several works on Atlantic languages, including early works on languages of the Jóola group (Kennedy 1964; Sapir 1965), have reported the existence of multiple infinitive markers. Sagna (2006; 2007; 2008) and Schultze-Berndt and Sagna (2010) are the first works to provide a description of the semantic categories underlying the morphological classification of these non-finite verbs in Atlantic languages. These works (see also Sagna 2013b; 2014) establish the semantic categories of overt verb classes using the labels in Table 23 and investigate the expression of pluractionality (multiplicity of actions) as well as uncovering semantic parallels between the nominal and verbal domains. Subsequent research on the semantic properties of the classification of non-finite verbs (verbal nouns) carried out on Baïnounk Gubëeher (Cobbinah 2013), a language with a long-standing contact with Eegimaa, also reports results such as the expression of multiplicity of action or participants, as well as the existence of a category of verbs of fishing, as previously proposed for Eegimaa. Additionally, Baïnounk Gubëeher has a verbal category for the domain of agriculture, which is not found in Eegimaa. A description of the semantic categories of verb classes in Kujireray, a language closely related to Eegimaa which has the same NCPs as Eegimaa, was carried out by Watson (2015). An examination of Table 23 shows that the labels and semantic categories I introduced in my analysis of Eegimaa have been adopted for the description of Kujireray. Nevertheless, the description of the verbal semantic categories in this language includes no discussion of similarities and differences with Eegimaa. In Section 6.3 I fill this gap by comparing the results of my previous analysis of the semantics of Eegimaa overt verb classes with the one proposed in Watson (2015) where relevant.

Table 23: The main verbal semantic categories of Eegimaa verb classes and Kujireray.

NCPs of Eegimaa and Kujireray	Sagna (2008; 2013, 2014) and Schultze-Berndt and Sagna (2010)	Watson (2015)
su-	Pluractionality (utterance verbs)	Pluractionality (psychological & verbalising opinions)
ba-	Multiplicity of actions and participants	Multiplicity of participants
bu-	Multiplicity of actions and participants	Multiple participants
ja-	fishing, hunting, sports (Contact and force)	fishing
mu-	Psychological/mental states	Mental capacity
ma-	Bodily processes	Bodily functions
	NA	Agriculture?

Building on previous research, the discussion that follows describes the types of semantic categories which underly the overt classification of verbs in Eegimaa.

6.3 Semantic categories of overt non-finite verb classes

6.3.1 Default NCP *e-*: Unspecified semantic category

On nouns, NCP *e-* is the default traditional singular marker in Eegimaa as it is indeed in other Jóola languages, as discussed in Chapter III. The term default marker has been used in this book to describe a traditional class which contains most of the nouns. It is the most semantically diverse singular gender/morphological class, which also serves as a transitional class for loanwords until they come to be assigned to other noun classes on semantic bases.

NCP *e-* is the prefix that occurs most frequently with non-finite verbs (both in type and token frequency). Most verbal stems that take the prefix *e-* are compatible only with this prefix and cannot take any other NCP. Such verbs include the non-derived verbs illustrated in (3) as well as verbs like causatives, derived with the causative suffix *-en*, as in (4), and discussed in more detail in Chapter IV (see Section 4.4.3.1).

(3)

e-ber	‘to laugh’	e-ham	‘to chase’
e-if	‘to breathe’	e-vvagen	‘to hurry up’
e-kkay	‘to go’	e-ñul	‘to boil’
é-mer	‘to swallow’	e-ral	‘to throw’

(4) e-limb ‘to be confused’ e-limb-en ‘to confuse’
e-mmag ‘to borrow’ e-mmag-en ‘to lend’
e-mmeŋ ‘to be full’ e-mmeŋ-en ‘to fill’

In addition to serving as the main infinitive/non-finite verb marker, with a number of stem, NCP *e-* occurs in alternation with other non-finite verb markers. All verb stems which combine with more than one NCP take the prefix *e-* as one of their NCPs. A case in point, illustrated in (5), is the verb stem *-amben* ‘divulge’, which combines with NCPs *e-*, *su-/si-* and *ba-* to yield distinct lexemes. Another illustration is the stem *-panor* ‘be quiet’ in (6), which combines with the prefixes *e-* and *fa-* to form to non-finite verbs of two different lexemes. These examples illustrate the derivational strategies whereby pairs of lexemes are formed from the same stem, differing only in the NCP they take, as illustrated in Section 6.3.3.3 with NCP *ba-*. The prefix *e-* is also involved in alternations where there is no clear lexical semantic difference, as in (7). In Chapter IV, I analysed this as an instance of transpositional inflection. I will show in Chapter VII that the alternations between NCP *e-* and other NCPs where, at first view, there is no obvious semantic distinction, reflect a strategy of semantic transitivity alternations where NCP *e-* is used to express event individuation, in the sense that it describes one-off events, which tend to imply the existence of an endpoint.

(5) e-amben ‘to divulge’ si-amben ‘to speak aloud in one’s sleep’
ba-amben ‘to perform the collective ritual of warding off a spell or an epidemic’

(6) e-panor ‘to be quiet’ fa-panor ‘to be shy’

(7) e-rafen ‘to breastfeed’ ga-rafen ‘to breastfeed’

In general, verbs using the prefix *e-* do not form a specific semantic category and in this sense, the function of this prefix is comparable to its function in the nominal domain, where the set of nouns it takes form a semantically heterogeneous semantic class. Recall, however, as pointed out in Chapter IV, that the prefix *e-* combines only with a few borrowed verbs, whereas in the nominal domain it is the default marker used with loanwords. Borrowed verbs mostly take the NCP *ga-* (see Chapter IV, Section 4.4.3.5). In summary, verbs that take the prefix *e-* as their only prefix do not constitute a conceptual semantic category of events. The only semantic property found with NCP *e-* is that of individuation marker (discussed in detailed in the next chapter).

6.3.2 Semantics of overt verb class *su-/si-*: Pluractional class – exasperating events

In the nominal domain, NCP *su-/si-* is the plural marker for nouns that take NCP *e-* in the singular. It is consequently also the nominal plural prefix that takes the largest number of nouns and loanwords which are not semantically integrated into the Eegimaa noun class system.

With verbs, NCP *e-* still combines with the largest number of non-finite verbs, as shown in the previous section, but NCP *su-/si-* combines with a small set of 15 recorded non-finite verbs, which include verbs of cognition and utterance (see (8)).

(8) su-osen 'to remember/remembering of events that might better be forgotten'
su-jumor 'to be/being forgetful/forgetfulness'
su-roren 'to question/questioning people/annoying interrogations'
si-ttehumor 'to dither/dithering'
su-bbunnen 'to banter/bantering/banter'
si-amben 'to speak in one's sleep/dreams'

Verbal stems that take NCP *su-/si-* can, in some contexts, also take NCP *e-* to individuate or delimit an event. It should be pointed out, however, that there is no direct correspondence between these prefixes in the verbal domains. This is exemplified in examples (9) to (11) with verbs taking NCP *su-/si-* as a non-finite verb marker. These verbs are generally intransitive and can only be transitivised in their non-finite forms using NCP *e-* as a way of marking of individuation (see (9)).

(9) umu n' e-roren waf
I.SG.COP PREP CLe-ask CLu-thing(V.SG)
'S/he is asking something.'

(10) *umu ni su-roren waf
I.SG.COP PREP CLsu-ask CLu-thing(V.SG)
'S/he is asking something.'

(11) umu ni su-roren
I.SG.COP PREP CLsu-ask
'S/he is questioning/bothering people with questions.'

Note that although all verbs from *su-/si-* non-finite set can, given the right context, take the NCP *e-*, verbs that primarily belong to the *e-* group are not normally com-

patible with the prefix *su-/si-*. For example, it is not possible to combine NCP marker *su-/si-* with verbs like *e-ffoñ* 'sing' and *e-añ* 'plough' to yield **su-ffoñ* 'sing' or **si-añ* 'plough'.

Semantically, NCP *su-/si-* is used with verbs to express verbal plurality or pluractionality, or multiplicity of events. The kind of pluractionality they express is one of iterativity of events. This is a form of iterativity characterised by multiple excessive repetitions of the same events. For example, the verb stem *-roren* means 'ask' when it combines with the singular NCP *e-* as in *e-roren* 'ask'. But it means 'to question/bother someone by asking too many questions' when it combines with NCP *su-/si-* as in *su-roren* 'question/questioning'. Iterativity, in this context, refers to the repetition of the entire event itself rather than the actions that make up the event, as is the case with NCP *ba-*, discussed below. The activity described by the verb is thus characterised by repetitions over a prolonged stretch of time. When such events take place more than is tolerable, the use of NCP *su-/si-* indicates a different categorisation of the events described. Most non-finite verbs that combine with NCP *su-/si-* describe exasperating situations typically characterised by an excessive frequency of the event described and temporal extension. For instance, *si-ggitten* 'showing/retelling too much' has the additional meaning of being too talkative and having a 'know-it-all' attitude. Using NCP *e-* as in *e-ggitten* 'to show/to indicate' expresses a single occurrence of such an event without the negative connotation.

In addition to its function as a nominal plural marker, NCP *su-/si-* also functions as a distributive marker for entities of different origins or kinds (Sagna 2011a). The function of distributives is to "mark the separation of members of a group, whether entities, events, qualities or locations" (Corbett 2000: 111). Distributivity thus implies plurality (Corbett 2000: 116). Illustrations of distributivity expressions in Eegimaa with NCP *su-/si-* are *si-jaora* 'visitors from different origins' and *su-llu* 'different kinds of meat (from different animals)'. It is argued that the kind of pluractionality expressed with NCP *su-/si-* is also a form of verbal distributivity (Cabredo Hofherr & Laca 2012a) in that the events described using this prefix are made up of iterated events which are construed as a set of separate complete events. Thus, asking repetitively implies that separate instances of asking (distributed events of asking questions) have taken place over different times.

6.3.3 Multiplicity of actions and participants using NCP *bV-*

Noun class prefixes described here as having the form bV- are NCP *bu-/bi-* and NCP *ba-*. In Chapter III, I show that these prefixes are markers of two morpho-

logical classes that belong to the same gender (Gender III). Semantically, these morphological classes show similarities at an abstract level by expressing the meaning of assemblages. Both NCPs also have collective functions where NCP *bu-/bi-* tends to express purposeful assemblages whereas NCP *ba-* is a diminutive collective, which describes small entities conceived of as a unit. Here, I show that these meanings from the nominal domain are carried over to the verb domain to describe events that are characterised by multiplicity or pluractionality of actions and participants as argued in Schultze-Berndt and Sagna (2010). In the next subsections I relate the concept of multiplicity as expressed in Eegimaa to typological research on verbal number (Newman 1990; Mithun 1988; Corbett 2000; Cabredo Hofherr & Laca 2012a).

6.3.3.1 Collective actions and behaviours verb class *bu-/ bi-*

Dynamic verbs taking NCP *bu-/bi-* are of two main types. The first type includes verbs that describe observable attitudes or behaviours that presuppose multiple actions, as illustrated in (12). They also include verbs which describe activities that involve gathering multiple items, as in example (13). Some of these verbs describe events that have to do with harvesting. For example, harvesting oysters requires gathering multiple items. Picking up one or a couple would not be enough to be described as an event from the *bu-/bi-* domain.

(12) bú-juret ‘to behave/behaving like a young unmarried woman.’
bú-puret ‘to behave/behaving like a young unmarried man.’
bu-jjobuet ‘to practice prostitution/prostitution’

(13) bu-yyajet ‘to collect/collecting dead wood.’
bí-jegah ‘to cut and gather/cutting and gathering sticks (to make a fence)’
bu-ssuet ‘to harvest/harvesting oyster’

The second type of dynamic verb includes verbs that generally take the reciprocal suffix *-or*. These verbs are shown in example (14) along with the sources of the reciprocal derivation, which tend to describe events that involve a single participant. The reciprocal verbs, on the other hand, generally describe activities that involve two or more participants, or that require multiplicity of actions, as in *bu-llujor* ‘to watch for/spy on’, which involves regularly looking out for something. In a sense, this is a kind of multiplicity of participants comparable to that described in the next section with NCP *ba-*. However, the difference between multiplicity of actions with NCP *bu-/bi-* and multiplicity expressed with NCP *ba-* is that the former expresses sociative meaning (Nedjalkov 2007; König & Gast 2008),

where the number of participants involved in joint action is easier to determine, whereas the latter describes a situation with more numerous participants conceived of as a collection, and thus harder to separate out.

(14)	e-lluj	'to look'	bu-lluj-or	'to watch/spy on'
	-	-	bú-foyor	'to compete/competing'
	ba-rif	'to challenge'	bi-rif-or	'to challenge/challenging each other'
	e-teh	'to hit'	bí-tteg-or	'to beat/beating each other' (fight)
	e-ñum	'to want'	bu-ñum-or	'to woo/wooing'
	e-jel	'to insult'	bí-jedd-or	'to insult/insulting one another'
	e-ppen	'to make love to'	bí-ppen-or	'to have/having a sexual intercourse'

Other verbs expressing multiplicity of participants describe events that involve acting on several entities (also seen in Kujireray: Watson, 2015). For example, the difference between *e-roh* 'to plant' and *bu-roh* 'to plant/planting' is that the former assumes an individuated event of planting, whereas in the second case, it is assumed that many plants are planted in one or several rice paddies.

NCP *bu-/bi-* combines with both stative and dynamic verbs. A few regularities can be observed with the semantics of stative verbs. As can be seen from example (15), the stative verbs mostly describe behavioural attributes or, in some cases, states like 'being deaf', which are not character attributes but can be observed from a person's actions. These verbs, like other statives, are not compatible with the progressive.

(15)	bí-celet	'to be/being selfish/ selfishness'
	bu-toppo	'to be/being deaf/deafness'
	bu-soŋet	'to be/being stupid/stupidity'
	bú-hoffi	'to be/being coward/cowardice'
	bu-gguret	'to be/being nonchalant/nonchalance'

In summary, non-finite verbs which take NCP *bu-/bi-* generally relate to repeated behaviour or to activities consisting of collecting objects or acting on several items. In that sense, they show parallels with the categorisation of entities in the nominal domain where NCP *bu-/bi-* functions as a collective for some nouns and as a marker for the semantic category of assemblages of entities.

6.3.3.2 Multiplicity of actions and participants with verb class *ba-*

NCP *ba-* mainly functions as a diminutive collective marker in the nominal domain. Collectives indicate that multiple entities within a group are viewed as

a unit (Corbett 2000). For example, the stem *-vvier* 'palm nut' will denote a pile of palm nuts conceived of as a unit when combined with the prefix *ba-*, whereas *e-vvier* denotes a singular palm nut and *si-vvier* a plurality of palm nuts not conceived of as a unit.

I argue here, following Schultze-Berndt & Sagna (2010), that the concept of multiplicity of small entities using NCP *ba-* from the nominal domain is carried over to the verbal domain. In the verbal domain, NCP *ba-* is a pluractional marker which describes events which are inherently composed of multiple and repetitive actions, and events that require the involvement of multiple participants. It is thus a marker of inherent iterativity which describes the "plurality or multiplicity of the verb's actions" (Newman 1990: 53–54) necessary to perform an event. These actions or subevents which make up the event take place in one and the same place.

Multiplicity of actions can be seen with some verbs that refer to inherently repetitive activities as exemplified in (16). For example, sweeping with a broom involves a continuous repetition of the same action.

(16) ba-vvu 'to sweep' (with a broom)
ba-pos 'to do laundry (by hand)'
bá-ñub 'to dye (fabric) (involves putting it in and out of a basin)'

Multiplicity of actions is also found with verbs from various semantic domains. For example, verbs of class *ba-* that refer to games describe types of games which are characterised by the continuous repetition of the same action as exemplified in (17). They differ from verbs of games such as football and wrestling, described in Section 6.3.5, which are characterised by the involvement of two opposite sides.

(17) ba-lem 'to play/playing a game consisting of throwing a knife so that it sticks to something, e.g. a tree trunk'
bá-suk 'to play/playing a kind of dice game'
ba-paj 'to play/playing a kind of dice game' (different from bá-suk)

Multiplicity of actions is also evident with verbs that describe some agricultural activities such as ploughing and weeding (see (18)), which are characteristically performed by the continuous repetition of the same actions. The most important fact here is that, similar to verbs of games in example (17), the basis for categorising Eegimaa verbs referring to some agricultural activities together is the concept of multiplicity of actions, rather than constituting an overt semantic verb class for agriculture like the one reported for Baïnounk Gubëeher (Cobbinah, 2013). Here the actions are conceived of collectively as part of the same event.

(18) ba-teŋen ‘to clean/cleaning a dyke using a traditional shovel’
ba-gub ‘to turn/turning the soil over to clear the path for ploughing’ (first stage in ploughing)
ba-ssef ‘to dig/digging furrows’ (second stage in ploughing)
ba-rab ‘to turn/turning the soil upside down’ (a way of ploughing)

Verbs that take NCP *ba-* also express the meaning of multiplicity of participants. Multiplicity of participants is illustrated in example (19) with verbs that refer to rituals like *ba-amben*, which involves villagers gathering and shouting together as part of a ritual to ward off a spell or keep an epidemic away from their environment. Here the participants act collectively, and the collective shouting is performed in the same place and at the same time. In all the examples in (19), the events must be performed by multiple participants rather than by an individual. The contribution of individuals to the collective action is highly regulated in such activities.

(19) ba-amben ‘to perform/performing collective ritual for warding off spells or epidemics’
ba-fum ‘to collectively punish/punishing a person by taking their belongings’
ba-teh ‘to put/putting money together’
bá-yyoy ‘to perform/performing the funeral rite of collective shouting’
bá-yu ‘to contribute/contributing rice’

Stative verbs that take NCP *ba-* include those that refer to some physical characteristics, e.g. ‘shortness’, but also those that describe the character of an individual, which is perceptible through patterns of behaviour, as exemplified in (20). In a sense, these are behavioural patterns or habits that can be observed from multiple deeds over a period of time. These stative verbs describe whole situations or characteristics whose individual components are difficult to isolate, unlike individual actions of dynamic verbs. In that sense they are comparable to mass nouns that take NCP *ba-*, e.g. *ba-tambaj* ‘puree’ and *ba-raj* ‘rice gruel’, which prototypically denote viscous liquids. Like these nouns, stative verbs in class NCP *ba-* are unbounded. One part of such a state would count as a manifestation of the characteristic being referred to.

(20) ba-pah ‘to be/being rude’
ba-ggoy ‘to be/being physically weak’
ba-salite ‘to be/being dirty’ (as a person)
bá-handaŋo ‘to have/having lordosis’
ba-reor ‘to be/being short/shortness’

In summary, the key semantic properties identified here for the verbal domain include multiplicity of actions or participants, as revealed by an analysis of different kinds of activities such as games, agricultural activities and collective actions. Notice that it is difficult to discriminate the semantic properties of NCP *ba-* from those found in NCP *bu-/ bi-*, described in the previous section, for both stative and dynamic verbs. These morphological classes belong to the same gender in the nominal domain, where they denote aggregations of small entities, including expressions of collective meaning and assemblages. In the verbal domain, these meanings are also found in the form of multiplicity of actions. It can be argued that, at a more abstract level, these two classes of non-finite verbs are related and belong to the same superordinate conceptual domain of events as they do in the nominal domain, where they belong to the same gender.

6.3.3.3 Parallels between the nominal and verbal domains: Verbal plurality and multiplicity

One of the key claims made in this chapter, and throughout the book, is that there are parallels in the expressions of the concept of multiplicity in the nominal domain with collective expressions, and in the verbal domain with the expression of pluractionality (Schultze-Berndt & Sagna 2010). The link between plurality in the nominal and the verbal domains has previously been established in the general linguistics literature (Frajzyngier 1977; Wolff 1977; Lasersohn 1995; van Geenhoven 2004).

In Eegimaa, these parallels manifest themselves in the use of the same linguistic means, namely, noun class prefixes with both nouns and verbs. Table 24 shows pairs of semantically related verbal lexemes that differ only in the prefixes they take. When the prefix NCP *e-* is used, it refers to an individual action. However, with NCP *ba-* the verbs describe multiplicity of actions or participants.

Table 24: Illustration of the expression of individual and multiple actions.

Individual action		**Multiplicity of actions**	
e-vvu	‘to clear’	ba-vvu	‘to sweep’ (repetition of same action with a broom)
e-gub	‘to turn upside down’	ba-gub	‘to turn soil around’ (repetition of same action)
e-ah	‘to pluck’	ba-ah	‘to weed’ (repetition of same action)
e-fum	‘to break’	ba-fum	‘to seize someone’s property’ (multiple individuals)
e-amben	‘to divulge/expose’	ba-amben	‘to jointly shout in a ritual’ (multiple individuals)

The first column shows verbs that describe individual actions. The meanings of these verbs are related to those in the third column. The difference between them, however, is that the latter describe either continuous and repetitive actions, or they refer to events that require the participation of multiple individuals. For example, the pair of verbs *e-pos* 'to wash' and *ba-pos* 'to do laundry' are semantically related, but the second is an event which is conventionally performed by continuously repeating the same action over and over again on the same object or multiple objects. The pair *e-amben* 'divulge/expose' – in the sense of showing something in public, e.g. a lost phone to find the owner – and *ba-amben* 'to jointly shout in a ritual' are also related, but the second verb describes an event of ritual shouting performed by the elders of a village to ward off a spell or an epidemic. In some sense, it is the second verb is conceived of as a way of publicly exposing a bad spell or disease to fight it. These two cases illustrate the expression of multiplicity of actions and participants in the verbal domain described above. The point here is that multiplicity of small entities in collective expressions in the nominal domain parallels multiplicity of actions, which cannot in themselves make up the whole event.

It is important to distinguish NCP alternations between *e-* and other noun class prefixes such as *ba-* as a derivational strategy resulting in pairs of semantically related lexemes, or senses of the same lexeme, and inflectional alternations between these prefixes to express event delimitation. In the examples below, NCP *e-* and *ba-* are used with the root *-pos*, whose generic meaning is 'wash'. This generic meaning is exemplified in (21). In (22) the use of NCP *ba-* with the same root results in the sense of doing laundry. Example (23) shows another use of NCP *e-* with the root *-pos*, this time in the specific sense of 'doing laundry', with a definite singular object, to indicate that there is an expected endpoint to the event. Expressions of event delimitation with alternations such as those exemplified in (22) and (23) are investigated in the next chapter.

(21) umu n'e-pos é-otor-ol
I.SG.COP PREP-CLe-wash CLe-car-3SG.POSS(I.SG)
'S/he is washing her/his car.'

(22) umu ni ba-pos
I.SG.COP PREP CLba-wash(do laundry)
'S/he is doing laundry.'

(23) umu n'e-pos gá-juo gagu
I.SG.COP PREP-CLe-wash CLga-shirt(V.SG) V.SG.DEF
'S/he is washing (laundering) the shirt.'

Parallels between the expression of multiplicity of entities and events can be ascertained by comparing the use of NCP *ba-* in collective expressions for nouns (see Table 25) to the expression of multiplicity of actions with non-finite verbs in Table 26.

Table 25: Multiplicity in the nominal domain.

ba-vvier	'palm nuts' (COLL)
ba-hola	'midges' (COLL)
ba-vval	'pebbles' (COLL)
ba-ray	'small fish' (COLL)

Non-finite verbs in Table 26 express plurality of actions or participants. It is primarily the actions that are quantified rather than agents or patients of the actions.

Table 26: Multiplicity in the verbal domain.

ba-vvu	'to sweep' (repetition of same action with a broom)
ba-gub	'to turn soil around' (repetition of same action)
ba-ah	'to weed' (repetition of same action)
ba-amben	'to jointly shout in a ritual' (multiple individuals)

This form of verbal plurality is comparable to expression of verbal plurality reported fort North American languages in Mithun (1988: 214), where verbal number is expressed by verb stem alternation on a limited number of stems used to "quantify the effect of actions, states, and events". In Eegimaa, it is the component actions of events that are quantified, rather than the events themselves. For example, verbs that refer to agricultural activities take NCP *ba-* because the events they describe are composed of multiple actions, but not because they describe extremely regular events or several outings to perform such an event, as reported for Kujireray (Watson 2015: 304). The verb *bá-seul* 'create/recreate a rice paddy' describes an event that is by no means a regular one. However, this agricultural activity is performed by laboriously digging repetitively into a hardened soil which has remained unexploited for many years, or which has never been ploughed before. Another example that shows that the use of NCP *ba-* has nothing to do with the number of outings is *ba-fas* 'draining rice paddies'. Draining is done by using a traditional shovel to dig repetitively on the dyke of a rice paddy to create a waterway. NCP *e-* is used to individuate the event of draining in a situation where the speaker has an endpoint in mind, as when only one paddy is

drained, usually in one outing. However, in a single outing, *ba-fas* 'draining rice paddies' can be used if the speaker focuses on the activity of draining rather than on the completion of such an activity. It does not matter if several paddies are acted upon or not. In fact, whether draining is done as a one-time activity for the day on one or several paddies or performed during several outings in the same morning or the same day is not crucial. What is important is the fact that events described with NCP *ba-* are characterised by multiple actions, and alternations are used only to indicate event delimitation. Here we are dealing with action plurality rather than event plurality. Events described with NCP *ba-* express a collection of actions and are, in a sense, viewed as a unit, i.e. one single event. This once again shows parallels with the collective expressions for small entities which are also conceived of as a unit when NCP *ba-* is used.

I am making two central claims here, following Schultze-Berndt and Sagna (2010). The first argument is that the use of NCP *ba-* with non-finite verbs serves to classify certain types of events/states, namely, those that express multiplicity or pluractionality of actions and participants. From the broader typological perspective, multiplicity of actions (continuous repetitions of the same action) and participants in Eegimaa is comparable to expressions of verbal plurality that describe collective agency or iterations in North American languages (Mithun 1988: 17). It is also possible to relate Eegimaa multiplicity of participants to Corbett's (2000: 246–250) participant number, which distinguishes single versus multiple participants. However, since the Eegimaa concept of multiplicity of actions describes a single event composed of multiple actions rather than multiple events, it may be distinguished from Corbett's other type of verbal number, that is, event number, where a distinction between single versus multiple events is made.

The second main claim here is that multiplicity of actions in the verbal domain parallels multiplicity of small entities/diminutive collective expression with nouns. These parallels are expressed by the use of NCP *ba-* in both nouns and verbs. The kind of pluractionality expressed here relates to inherent iterativity/repetitive expression or collectivity necessary to perform an event, and, in this sense, it differs from the kind of pluractionality described in 6.3.2, which is characterised by the excessive iteration of an event.

6.3.4 Non-finite verb class ju-/ji-: Euphemism

NCP *ju-/ji-* has been recorded with four non-finite verbs, as illustrated in (24). In the nominal domain, this prefix functions as a marker for nouns that denote small entities and is used in evaluative morphology to express diminutive meaning.

(24) ji-jiŋ ‘to mount/mounting’
ji-bij ‘to lie/lying/a lie’
ju-huhulen ‘to pamper/pampering a bride’
ji-geç ‘to provoke/provoking/provocation’

The use of NCP *ju-/ji-* with non-finite verbs is interpreted as having a euphemistic function, because the events described by the verbs that take this prefix have attenuative meaning. Parallels between the nominal and verbal domains appear to be related to the function of evaluative morphology and euphemism. The verb stem *-jiŋ* ‘climb’ is the only one to occur with non-finite verb markers other than NCP *ju-/ji-*, as in *e-jiŋ* ‘climb’ and *bi-jiŋ* ‘climbing’. The non-finite verb *bi-jiŋ* ‘to climb/climbing’ has the meaning doing a lot of climbing, whereas *e-jiŋ* ‘to climb’ is used to individuate the event of climbing. Semantically, these two non-finite verbs contrast with *ji-jiŋ* ‘to mount/mounting (copulating for animals)’. The latter uses the prefix *ji-* as a euphemism to describe an event which is considered a social taboo in Eegimaa culture, in the sense that it is an act that is spoken about in restricted contexts or not shown in public. The use of NCP *ju-/ji-* is thus a figurative expression of such a taboo action. Another example of euphemistic use of NCP *ju-/ji-* with verbs is with the verb *ji-bij* ‘to lie/lying/be in the wrong’. The argument here is that the use of NCP *ju-/ji-* most likely originates from an attenuation consisting of figuratively presenting the act of lying, probably for social reasons, since it is offensive to describe a person’s statement, especially one from the older generation, as an act of lying. The third instance of euphemistic use of NCP *ju-/ji-* is with *ju-huhulen* ‘to spoil a bereaved woman/new king/bride’. This lexeme is derived from the root *-hul* ‘mourn’ and undergoes morphological reduplication before combining with the causative suffix *-en*. A possible literal translation would be ‘make somebody’s little mourning’. *ju-huhulen* ‘to spoil a bereaved woman/new king/bride’ is a cultural practice which a bereaved woman, a new king or a bride undergoes during the period that immediately follows, e.g. the death of a husband or child, an enthronement (for the king), or a marriage for the bride (a kind of honeymoon). During that time the person undergoing this ritual restricts most of their social activities in their home and is always surrounded by relatives and friends who feed them, provide support and advice and help them in their household tasks (Snyder 1973). The euphemism in this case consists of conceptualising the activity of looking after a bride or a new king as a somewhat diminished act of mourning, based on the similarities in the fact that they are looked after the same way as a bereaved woman. It is unclear how the last example in (24) *ji-geç* ‘to provoke/provoking/provocation is connected with the notion of euphemism or attenuation. NCP *ju-/ji-* is a singular morphological class of Gender VI, as is NCP *ja-* described in the next section.

6.3.5 Contact and force with ja-: Killing, hunting, fishing and opposition sports

Non-finite verbs in the overt verb class *ja-* are mainly verbs of killing, hunting, and fishing and include a few verbs referring to sports that are played with opposite sides. The actions described by these verbs, which belong to different semantic fields, involve contact in some cases, but mainly an opposition of forces. Sagna (2008) proposed that at a more abstract level, the events described in this overt verb class relates to a domain or image schema which may be labelled "contact and force" and which also implies physical activities that presuppose "attraction and counterforce (Clausner & Croft 1999)". The term "verbs of contact and force" was borrowed from Schultze-Berndt (2000: 291), where it is used to describe a class of verbs of Jaminjung (Mirndi, Non-Pama-Nyungan, Australia) that "encode different means of affecting an entity by physical interaction". In Eegimaa the verbs of killing, fishing and physical games with opponents, which take NCP *ja-*, also have the components of contact and force. The verbs of killing are illustrated in (25).

(25) ja-muh 'to kill/killing/ to massacre/massacring'
ja-ban 'to exterminate/exterminating'
ja-ramul 'to slaughter/slaughtering'

Verbs of hunting and fishing illustrated in (26) and (27) also involve dominating or killing after trapping, cornering, or chasing and catching. Note that *ja-baŋen* 'trapping' belongs in this overt verb class along with verbs that describe the process of implementing fishing-traps like *ja-ya* 'digging sticks in to make a fishing trap'.

(26) ja-ssaw 'to hunt/hunting'
já-pumben 'to hunt/hunting with a gun'
já-kkoben 'to hunt /hunting by hiding on branches'
ja-baŋen 'to trap/trapping'

(27) ja-bbut 'to fish/fishing with a fishing rod'
ja-mbal 'to fish/fishing with a net'
ja-puç 'to fish/fishing with harpoon'
ja-ppaŋ 'to fish/fishing with a fishing fence where fish is trapped'

The meaning of chasing and catching applies to verbs for handling cattle like *já-omen* 'to round up/rounding up cattle' and *já-rebah* 'searching for a domestic animal (usually a cow), in order to catch it and bring it back home'. The meanings

of trapping and applying force and counterforce are found in verbs that describe games or opposition sports, as illustrated in (28).

(28) ja-baloŋ ‘to play/playing football’
já-kkuj ‘to wrestle/wrestling’
ja-ŋor ‘to play/playing the ja-ŋor game’

The non-finite verb *ja-kkuj* ‘to wrestle/wrestling’ implies to opponents trying to win using force and techniques to trap each other. *Ja-ŋor* ‘to play/playing the *ja-ŋor* game’ describes a traditional ball game with apposite teams. This game has disappeared and is unknown to younger Eegimaa speakers. *Ja-baloŋ* ‘to play/playing football’ is the only loanword recorded in this class and also the only loanword denoting a game with opposing sides. Note that games in verb class *ja-* contrast with those in OVC *ba-* (Section 6.3.3.2), which describe games characterised by multiplicity of actions. Only two stative verbs, *já-saŋ* ‘to be skillful at dancing/ dance skills’ and *já-ari* ‘to be beautiful/ beauty’, have been recorded in this class. Most non-finite verbs that take NCP *ja-* can also combine with NCP *e-* to individuate the events being referred to.

Note that there are a small number of verbs in this class that have the meaning of ‘manipulating or acting over X’, where X stands for the entity that is denoted by a stem which can flexibly function as a noun or a verb. For example, the non-finite verbs in (29) could be interpreted as manipulating objects whose corresponding nouns are shown in the third column. Thus, the non-finite verb *ja-baloŋ* ‘to play/playing football’ has the same root as *fu-baloŋ* ‘football’ (the object), and the use of the prefix *ja-* may be interpreted as describing an event of playing a football. The same can be said about *ja-bbut* ‘to fish/fishing with a fishing rod’, which may be seen as manipulating a *ga-bbut* ‘fishing with a rod’.

(29)	ja-baloŋ	‘to play/playing football/football game’	fu-baloŋ	‘football (object)’
	ja-bbut	‘to fish/fishing with a fishing rod’	ga-bbut	‘fishing rod’
	já-pumben	‘to hunt/hunting with a gun’	é-pumben	‘gun’

An examination of all the verbs that take NCP *ja-* shows, however, that ‘Manipulating X’ cannot be seen as a more inclusive abstract meaning to capture the semantics of non-finite verbs which combine with this prefix because this semantic feature applies only to a handful of them.

The prefix *ja-* combines with more non-finite verbs than nouns. In the nominal domain it is generally used to personify non-human entities in folktales. It is also used in one instance as a collective marker with the word *ja-çer* ‘ground

rice'. There do not seem to be parallels between the nominal and verbal domains because the functions of this prefix in the two domains seem not to be linked in any obvious way.

6.3.6 Inherent psychological and physical states and abilities: overt verb class mu-/mi-

NCP *mu-/mi-* is the plural marker of morphological class *ju-/ji-* from Gender VI in the nominal domain, where it attaches to nouns that denote small entities (in the singular and the plural), some masses such as liquids including non-alcoholic drinks and some abstract entities, as well as functioning as the diminutive plural marker. In the verbal domain NCP *mu-/mi-* combines with verbs that mostly express what may be described as *inherent psychological* and *internal physical states*. Non-finite verbs that refer to such states are all stative and intransitive verbs that refer to property concepts, equivalent to English adjectives (see (30)).

(30)

mu-jah	'to be/being intelligent/intelligence'
mú-ssum	'to be/being good/tasty/ goodness/tastiness'
mu-us	'to be/being fast/velocity'
mu-jas	'to be/being fast/velocity'
mu-ŋŋay	'to be/being slow/slowness'
mu-ttuho	'to be/being cunning/cunning'
mu-jjam	'to be/being skilful/skill'
mú-ssali	'to be/being dexterous/dexterity'
mú-uet	'to have/having supernatural power or vision'
mí-ppim	'to be/being blind/ blindness'

Non-finite verbs of class *mu-/mi-* refer to properties which are an intrinsic part of the entity being described. For example, *mu-jah* 'to be/ being intelligent/intelligence' and *mú-uet* 'to have/having supernatural power' refer to a psychological faculty or ability. As for verbs like *mu-jas* 'to be/being fast' and *mi-ñeh* 'to be/being sharp', they refer to inherent characteristics of both human and non-human entities.

Parallels between the nominal and verbal domains in the use of NCP *mu-/mi-* can be established. Liquids and masses from the nominal domain of class *mu-/mi-* are unbounded entities. This is also a plural class, a number value which also expresses unboundedness. The expression of unbounded nouns also parallels that of unbounded states, through the use of the same plural prefixes (Schultze-Berndt & Sagna 2010), as illustrated in (30).

6.3.7 The bodily expressions class: overt verb class ma-

NCP *ma-* is a prefix which in the nominal domain is associated with the same gender (Gender VI plural) as *mu-/mi-* discussed above. It generally combines with non-count nouns such as *má-ssume* 'that which is good/sweet part/sweetness' as discussed below. Non-finite verbs that combine with NCP *ma-* are mostly dynamic verbs, with a few exceptions such as *má-tali* 'to be/being bitter'. Dynamic verbs in this subclass describe bodily processes that refer to emission or excretion from the body or in rare cases verbs of ingestion (see (31) and (32)). Verbs of this subclass include both transitive and intransitive verbs. For example, *ma-rem* 'drink/drinking' can take *bu-nuh* 'palm wine' as an object, showing that it is a transitive verb. The verb *má-jju* 'blow one's nose', on the other hand, normally occurs as an intransitive verb, though in some contexts it may be used transitively. NCP *e-* can be used with the verbal stems exemplified below instead of NCP *ma-*, to individuate events described by the verb (see Chapter VII).

(31) má-jju 'to blow/blowing one's nose'
ma-sur 'to urinate/urinating'
ma-boy 'to defecate/defecating'
má-tti 'to fart/farting'
má-amulo 'to yawn/yawning'

(32) ma-rem 'to drink/drink'

The bodily processes described by verbs taking NCP *ma-* refer to continuous, unbounded events. For example, bodily events like *ma-rem* 'to drink/drinking' or *ma-sur* 'urinate/urinating' are unbounded because if the action described is interrupted, it can nevertheless be argued that it has taken place. Unboundedness is a property that verbs of this class share with mass and abstract nouns which take NCP *ma-*. In the nominal domain the prefix *ma-* combines with non-countable nouns denoting some abstract nouns, generally those that denote 'the characteristic of being X' and also parts of things having those properties. For example, nouns like *ma-pule* 'that which is rotten/the rotten part of something', *má-ssume* 'that which is good/sweet/ the sweet part of something', *má-talie* 'that which is bitter/the bitter part of something' denote abstract nouns that denote parts of things. If a portion of a substance denoted by a noun is extracted, the substance remains the same mass/homogenous entity. For example, *má-burie* 'that which is soft/the soft part of something' will denote any soft part of an entity referred to.

There is no clear semantic relation between NCPs *mu-/mi-* and *ma-* aside from functioning as morphological class markers of the same gender in the nom-

inal domain. Schultze-Berndt & Sagna's (2010) argument that there are parallels between the nominal and verbal domains in the use of NCP *ma-* is based on the presence of the property of unboundedness in both domains. Parallels between the nominal and the verbal domain, as pointed out above, have been suggested in the literature, for example by Lasersohn (1995: 241), who argues for the presence of an "analog in the domain of events to the more familiar phenomenon of plurality in the domain of individuals". In Eegimaa, NCP *mu-/mi-* and NCP *ma-* are both plural markers of Gender VI in the nominal domain. Like mass nouns, plurals express unboundedness. Using these plural noun class prefixes to describe unbounded entities with nouns and unbounded events/states with verbs is an indication of the parallel expressions of unboundedness between the two domains.

It is important to note that not all verbs referring to bodily functions combine with NCP *ma-*. For example, *e-jjen* 'to sweat/sweating', *e-if* 'breath', *e-mas* 'to spit/spitting' are bodily function verbs which take NCP *e-* but cannot combine with NCP *ma-*. It is not clear why other bodily function verbs use other non-finite verbs markers such as *e-*.

6.3.8 Class fu-/fi-: Unclear semantic verb class

NCP *fu-/fi-* attaches to nouns that mostly denote round objects such as fruits in the nominal domain. With the non-finite verbs exemplified in (33) the semantic properties expressed by the use of NCP *fu-/fi-* are unclear. However, we can observe that dynamic verbs taking NCP *fu-/fi-* have a more durative and atelic meaning. When the same stems combine with NCP *e-* as illustrated with *-im* 'hunt/hunting' they mark event delimitation.

(33) fi-im 'to hunt/hunting'
e-im 'to hunt/hunting' (a specific entity)
fu-kkop 'to hide/hiding'
fu-nnom 'to purchase/purchasing'
fi-ttih 'to wage/waging a war'
fú-rasor 'to play/playing'

6.3.9 Depraved habits in verb class fa-

NCP *fa-* combines mostly with dynamic verbs. Only two stative verbs were recorded in this class. Verbs in this non-finite class express bad, depraved, and disgraceful habits (see (34)).

(34) fa-maen ‘touching (sexually)’
fa-kkal ‘to have/having the bad habit of minimising things’
fá-ruho ‘to daydream/daydreaming’ (as a habit)
fa-ŋŋaben ‘to have the habit of walking around with one’s mouth wide open’
fa-hot ‘to have the habit of hiding to listen to conversations’

The expression of bad habits can be illustrated for instance, with the contrast between *e-ŋŋaben* ‘open one’s mouth (once)’ and *fa-ŋŋaben* ‘to have/having the bad habit of leaving one’s mouth always open’, which also has the connotation of acting like a retarded person.

Verbs combine with both NCP *e-* and NCP *fa-* either to form a pair of related lexemes or to express event delimitation. For example, *e-panor* ‘to quiet down’ and *e-hot* ‘to stick/ to hide’, contrast with the derived lexemes *fa-panor* ‘to be/ being shy’ and *fa-hot* ‘to have/having the habit of hiding, usually to listen to private conversations’. Lexemes that take NCP *fa-* refer to habitual and usually disparaged actions.

The semantics of verbs taking NCP *fa-* suggests parallels, albeit somewhat blurred, with the semantics of nouns that take this prefix to express collective meaning in the nominal domain. Recall that NCP *fa-* functions as a collective marker for predatory or aggressive insects that leave in swarms (See 5.3.4.2). These are entities that show a homogeneous behavioural pattern. I argue that, with verbs, NCP *fa-* functions also to describe homogeneous patterns of behaviour, or behavioural traits in some cases, which are considered as vices.

Note that in the nominal domain, NCP *fu-*/*fi-* and NCP *fa-* belong to the same gender and have semantic properties in common. In the verbal domain their semantic relations are harder to ascertain, especially because the semantic category NCP *fu-*/*fi-* is more difficult to determine.

6.3.10 Reprehensible behaviour gu-

NCP *gu-* is another non-finite verb marker with very few members. In the nominal domain, this prefix functions as a plural marker for a few hundred nouns denoting entities like those having a round configuration, language names, and many other nouns whose semantics is less transparent. There are only seven recorded verbs which combine with this prefix in the verbal domain and all are dynamic verbs (see (35)). The most common semantic properties shared between these verbs is that aside from *gú-nigo* ‘observing a mourning’, all events refer to bad/unappreciated

human behaviours such as begging and slandering. It is, however, unclear why there is a verb that refers to mourning within this category.

(35) gú-ccin 'to beg/begging'
gú-mmeñ 'to slander/slandering'
gú-rihen 'to side with a person in the wrong'
gu-cciñ 'to jealously exclude people from one's environment'
gú-boñ 'to mandate/have a habit of mandating busy people'
gú-teh 'to beat up/beating up'
gú-nigo 'to observe/observing mourning'

It is difficult to provide an elaborate account of this semantic category of non-finite verbs/events, given the limited number of such verbs. But it appears that, with one exception, a few events are categorised in Eegimaa as socially reprehensible habits. Note that there are many more reprehensible behaviours than this category includes. For example, the events described here resemble those described in 6.3.9. However, though the difference between these two kinds of events is not very clear, those in example (34) are habits whereas the bad behaviours in (35) describe individual actions or more punctual behaviours that may be repeated, but which are not necessarily habits. Given the plural function of NCP *gu-* in the nominal domain, it may be argued that this prefix expresses a form of pluractional meaning describing multiplicity of entities and also events seen as bad behaviours, or behaviours that can be expected to be repeated, without being fixed habits.

6.3.11 Durative verb class 9 *ga-*

Sagna (2008) established the existence of a "durative" verb class *ga-* . This is the second largest non-finite verb class after OVC *e-*. It is the class into which borrowed verbs from both French and Wolof are typically placed. This non-finite verb category is associated with durativity since non-finite verbs in the *ga-* verb class describe events that are mostly extended in time. A few such verbs are illustrated in (36), while a list of loanwords, including some that refer to sports activities, is given in (37).

(36) ga-fen 'to graze/grazing'
ga-lollobor 'to chat/chatting'
gá-sotten 'to cure/curing'
ga-ttien 'to glue/gluing'
ga-vva 'Tapping palm wine'

(37) ga-kkonfese 'to confess/confessing one's sins (French)'
gá-pettur 'to paint/painting (French)'
ga-ggarde 'to guard/guarding'
ga-arbitre 'to referee/refereeing a game'

Verbs whose non-finite form is expressed with prefix *ga-* are usually felt to be odd when used with NCP *e-* unless they are used to individuate events (see Chapter VII). There are recurrent semantic features from this overt verb class, although most of these features are by no means restricted to this class. These verbs are generally dynamic verbs, most of them durative verbs usually describing processes. Such verbs include *ga-ap* 'to sculpt/sculpting' and *ga-law* 'to pray/praying' and those in (36). All recorded loanwords in this class are also mainly dynamic and most comprise the features of durativity (see (37)). For example, loan verbs like *ga-anseñe* 'to teach/teaching (French)' and *ga-kkalame* 'to put/putting up a complaint (Wolof)' are dynamic and durative verbs. Some loanwords from this class also express semantic features such as the manipulation of objects of different configurations. For example, *gá-sofor* 'to drive/driving' (French), *gá-binda* 'to write/writing' (Wolof) and *gá-ppikkir* 'to inject/injecting' (French) involve the manipulation of objects of different configuration and a certain duration of the event. Other loan verbs are verbs of voice communication. These include *ga-waare* 'to preach/preaching' (Wolof), *ga-waddan* 'to call/calling for a muslim prayer' (Wolof) and *ga-ttelefone* 'to telephone/telephoning' (French). Borrowed non-finite verbs in OVC *ga-* also alternate with the prefix *e-* to mark event individuation. In terms of the parallels between the nominal and verbal domains, the relationship is primarily based on the property of durativity. In the nominal domain, M-class *ga-* is associated with the meanings of flatness, width and extended (flat/inactive) periods of times, hence the link with durativity of events in the verbal domain.

6.3.12 Social organisation – ñV-

6.3.12.1 Social interactions 1 – class ñu-

The overt verb class *ñu-* illustrated in (38), is a small morphological class of non-finite verbs with three members. Non-finite verbs in this class are only normally compatible with NCP *e-* when they are used to individuate events. They refer to events or states that describe aspects of social interactions and in that sense, they parallel the use of NCP *ñu-* in the nominal domain, where it is a marker of a morphological class having to do with aspects of social organisation.

(38) ñu-ccoc ‘to sabotage/sabotaging/sabotage’
ñu-ssu ‘to be ashamed/ being ashamed/shame’
ñu-hul ‘to do a funeral/funeral’

6.3.12.2 Social interactions 2 – class ña-

Like the overt verb class *ñu-*, the overt verb class *ña-* relates to social organisation and therefore shows parallels with noun class *ña-* in the nominal domain. For example, non-finite verbs listed in (39) mostly refer to deplorable acts[44] in interpersonal relationships, and in social or economic interactions. Its semantic category on nouns is the domain of experience of social organisation.

(39) ña-haw ‘to be/begging for something, especially food’
ña-mbaf ‘to sell/selling one’s rice field property’
ña-linor ‘to chase skirts’ (informal)

The fact that both verb classes *ñu-* and *ña-* relate to aspects of social organisation suggests that these non-finite classes (which share the same initial prefix consonant) are related both morphologically and conceptually, which justifies their inclusion in a superordinate category *ñV*. Recall from Chapter III that morphological classes *ñu-* and *ña-* belong to the same gender in the nominal domain. Thus, it can be argued that the overt verb classes *ñu-* and *ña-* are semantically linked at an abstract level to aspects of social organisation in the verbal domain.

6.3.13 The domain of experience of grief – class u-

NCP *u-* is the plural marker in the nominal domain for nouns which, in the singular, take the prefixes *ga-* (flat, augmentative and pejorative meanings), *bu-* (assemblages, oversized entities and maternity and birth) and *ñu-* (social organisation). The semantics of the nouns taking these last two prefixes is culture-specific. In its function as a non-finite verb marker, the NCP *u-* attaches to only four recorded stems (see (40)), making it one of the smallest overt verb classes.

44 An example of deplorable social behaviour would be basely selling a plot of rice field, which is unacceptable among Eegimaa speakers.

(40) u-kkoŋ ‘to cry/crying’
u-ggeŋih ‘to whimper/whimpering’
u-et ‘to sulk/sulking’
u-ccigo ‘to end mourning/end of mourning ritual’

With such a small number of cases, we can only speculate as to what the events described have in common. These verbs are all dynamic verbs referring to activities expressing grief. Some of the non-finite verbs describe events which include some level of duration and elements of repetitive action, as in crying and whimpering. But the idea of plurality of action is not strong here. The case of ‘mourning’ is, however, an interesting one. The stem *-ccigo* can combine with at least two NCPs, namely *u-* and *ga-*, deriving the lexemes *gá-ccigo* ‘shave/shaving’ and *u-ccigo* ‘to perform rituals to end mourning/ end of mourning’. The lexeme *gá-ccigo* ‘shave/shaving’ refers to the general event of shaving in normal life, which contrasts with *ú-ccigo* ‘yearly ritual shaving to end mourning’.[45]

(41) n-a-ag-e ja-ol n-a-kka-e ga-ccigo
REAL-I.3SG-go-CPL mother-3SG.POSS REAL-I.3SG-go-CPL CLga-shave.oneself
‘S/he said her/his mother has gone to shave herself.’

(42) n-a-ag-e ja-ol n-a-kka-e u-ccigo
REAL-I.3SG-go-CPL mother-3SG.POSS REAL-I.3SG-go-CPL CLu-shave.onself
‘S/he said her/his mother has gone to partake in an end of mourning ceremony.’

It can be proposed that non-finite verbs that take NCP *u-* form a category that expresses what Lakoff (1987) refers to as a domain of experience, in this case, one of grief.

45 Traditionally, a woman who has lost her husband or a child observes a period of mourning that ends only on the *u-ccigo* day, the day the village ends the mourning of all people who deceased in the same year. During this period of mourning, the bereaved person has restricted social activities, and in the past, part of the mourning process included not shaving one’s head till the end of the mourning period. It is only on the day of the communal end of mourning that the woman shaves. It can be suggested that the root *-ccigo* ‘shave’ is used with NCP *u-* as a metonymic way to capture the idea of collective shaving during a sad communal event.

6.4 Conclusion

In this chapter, I have examined the principles underlying the classification of Eegimaa non-finite verbs into the several different lexically determined overt classes established in (Chapter IV). I argue that the use of fifteen NCPs to form Eegimaa non-finite verbs, including the equivalent of infinitives, reflects a strategy of event categorisation by which different kinds of events in the Eegimaa people's experience are categorised. Some of the key semantic categories include different kinds of pluractionals, of which the expression of excessive iteration and multiplicity of actions and participants. Other sematic categories are the expression of contact and force, disparaged behaviours and durative meaning. Many of these overt verb classes tend to be associated with events and states that are negatively evaluated. As with the nominal classification, overt verb classes are associated with semantic content and these semantic contents cannot be fully understood without an understanding of the culture-specific nature of the activities they denote. An examination of these semantic categories has revealed that collective and plural markers from the nominal domain function as pluractional markers describing different kinds of multiplicities, including multiplicity of participants as well as different kinds of iterativity expressions. Finally, I show, as in previous work (Sagna 2008; Schultze-Berndt & Sagna 2010), that the use of the same linguistic means, i.e. NCPs, to classify verbs and nouns reflects parallels between the nominal and verbal domains, and that these parallels are generally based on boundedness. I have shown in this chapter, that the culture-specific semantic categorisation of events into overt classes is not directly linked to aspectual types in the sense that there is no one-to-one link between the meanings of NCPs and aspectual categories such as activities and accomplishment, for example. Overt verb classes are semantically more specific than aspectual classes and are strongly associated with culture-specific semantic content, as in the nominal domain, and that although the semantic properties of some of the overt classes are synchronically difficult to ascertain, it is still possible to account for the patterns behind the semantic categorisation of most events categories. However, aspectual features such as telicity are important to account for the principles underlying the alternation of NCPs on the same stem. This phenomenon is investigated in the next chapter.

7 Event delimitation: NCP alternations on non-finite verbs

7.1 Introduction

This chapter explores the strategies by which event delimitation is expressed on non-finite verbs through noun class prefix (NCP) alternations. The Eegimaa non-finite verbs are formed with several different NCPs, as shown in the previous chapters. The combination of a verbal stem and one of the 15 possible NCPs is lexically determined. However, many stems allow alternations between at least two prefixes. Whenever these alternations are attested, one of the NCPs must be the nominal default prefix NCP *e-*, which combines with most Eegimaa nouns and loanwords. The other NCPs that participate in alternations can be any of the NCPs attested on non-finite verbs, such as NCP *ja-* and *ba-*.

Examination of the principles underlying these NCP alternations reveals that NCP *e-* is used to express event delimitation. It functions as a marker of individuation and is, as a result, preferred in clauses having definite singular objects, and expressing features like telicity, specificity and affectedness (Beavers 2011). In the typological literature, these features are associated with higher transitivity (Hopper & Thompson 1980; Næss 2007). By contrast, non-default prefixes like *ba-* and *ga-* are preferred in clauses with indefinite and plural objects, where atelicity, non-individuation, non-specificity, and non-affectedness are expressed. Here I demonstrate that such contrasts are even more apparent with objectless clauses where the use of NCP *e-* produces very odd sentences. NCP *e-* would be acceptable in objectless clauses only in context-dependent object deletion, where the deleted object can be recovered from the context (Næss 2007: 124–125).

This chapter is structured around three sections. Section 7.2 presents instances of NCP alternations on non-finite verbs taking different kinds of objects and in objectless clauses, focusing on noun class prefixes *e-*, *ba-* and *ja-*. In Section 7.3, I introduce the theoretical assumptions behind the transitivity hierarchy distinction developed in the typological literature. Finally, Section 7.4 provides a detailed analysis of the underlying semantic properties of NCP alternations, mainly using examples of alternations between NCPs *e-* and *ga-*. The reader should bear in mind that all the NCPs attested with non-finite verbs participate in these alternations.

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7.2 NCP alternations on non-finite verbs

NCP alternations on non-finite verbs are instances when one or more NCPs are permissible with the same verbal stem. As pointed out in the introduction, whenever these alternations are attested, one of the prefixes must be NCP *e-*. All NCPs that are attested with non-finite verbs can be used in these alternations. This phenomenon was introduced in Chapter IV (Section 4.4.4), where three scenarios were discussed. The most relevant scenarios for our discussion is one where, at first view, NCPs alternations do not seem to yield clear a semantic distinction between the resulting non-finite verb (see (1) and (2)). In these examples, the stem *-rafen* combines with NCPs *e-* and *ga-* in a clause taking a definite singular object[46]; but there is a nuance between these sentences. Sapir (1965: 77) reports a similar phenomenon in Jóola Foñi and describes NCP alternations as instances of free variation.

(1) aare-aw umu ni e-raf-en
[CLa]woman-I.SG.DEF I.SG.COM PREP CLe-suckle-CAUS
a-ññil ahu
CLa-child(I.SG) I.SG.DEF
'The woman is breastfeeding the child for the moment.' (Endpoint in mind)

(2) aare-aw umu ni ga-raf-en
[CLa]woman-I.SG.DEF I.SG.COM PREP CLga-suckle-CAUS
a-ññil ahu
CLa-child(I.SG) I.SG.DEF
'The woman is breastfeeding the child.' (No endpoint in mind)

In Section 7.4 I will demonstrate that alternations of this sort are not arbitrary. Rather, they reflect strategies of event delimitation, and express differences in the features associated with semantic transitivity. NCP alternations are also found in clauses that take definite plural objects, indefinite objects, and objectless clauses. Examples (3) and (4) illustrate NCP alternations in clauses with definite plural objects with a verb taking NCPs *ja-* and *e-*. With definite plural objects, NCPs like *ja-*, are preferred to *e-*. I will show in the next section that the preference for pre-

46 In the examples used as illustrations in this chapter, I will attempt to capture nuances between pairs of sentences that differ only in their verbal prefixes. When the use of a given Eegimaa prefix results in a sentence that sounds odd (marked here with ??), I try to provide a translation into English that similarly conveys a feeling of oddity, although no directly comparable grammatical distinction may exist.

fixes other than NCP *e-* with definite plural objects can be accounted for based on the theory of prototypical transitivity.

(3) Aliou n-a-hal-e ja-mbal u-fas
Aliou REAL-I.3SG-stop-CPL CLja-fish.with.net CLu-shrimp
'Aliou has stopped fishing shrimps.' (Long term occupation)

(4) ??Aliou n-a-hal-e e-mbal u-fas
Aliou REAL-I.3SG-stop-CPL CLe-fish.with.net CLu-shrimp
'Aliou stopped fishing shrimps for the moment.' (temporary activity, with endpoint in mind)

NCP alternations in objectless clauses are illustrated in (5) and (6), where the use of NCP *e-* results in an ungrammatical or odd-sounding sentence; the English gloss is designed to convey this oddity. Here again, I will argue that the transitivity hierarchy distinctions can account for the preference for prefixes other than NCP *e-* as markers of non-finiteness.

(5) Appa n-a-kkumasi-e ba-teŋen
Appa REAL-I.3SG-start-CPL CLba-clean.dikes
'Dad has started cleaning dikes (in the rice paddies)' (no endpoint in mind)

(6) ??Appa na-kkumasi-e e-teŋen
Appa REAL-I.3SG-start-CPL CLe-clean.dikes
'Dad has started cleaning dikes (in the rice paddies) for the moment' (endpoint in mind)

Before discussing the different contexts in which the transitivity hierarchy can play a role in accounting for differences in NCP alternations, I introduce the theory of transitivity hierarchy.

7.3 The semantic transitivity parameters

In traditional accounts, the notion of transitivity is viewed as constituting a clear-cut dichotomy between transitive and intransitive verbs. In the first case, verbs occur in clauses with two or more arguments, whereas in the second, verbs are found in clauses having only one argument.

Hopper &Thompson (1980) argue that transitivity is a continuum, and that clauses can be ranked as more or less transitive. Hopper and Thompson propose

the parameters presented in Table 27 to account for transitivity. They argue that if a clause exhibits a great number of high transitivity features, it will be ranked higher in the transitivity scale than one that shows fewer high transitivity features, which will be classified as a lower transitive clause.[47]

Table 27: Transitivity parameters according to Hopper and Thompson (1980).

		High	Low
A.	Participants	2 or more participants, A and O	I participant
B.	Kinesis	Action	Non-action
C.	Aspect	Telic	Atelic
D.	Punctuality	Punctual	Non-punctual
E.	Volitionality	Volitional	Non-volitional
F.	Affirmation	Affirmative	Negative
G.	Mode	Realis	Irrealis
H.	Agency	A high in potency	A low in potency
I.	Affectedness of O	O totally affected	O not affected
J.	Individuation	O highly individuated	O non-individuated

Hopper and Thompson (1980) argue further that the parameter of individuation is composed of the features presented in Table 28.

Table 28: The features of the individuation parameter.

individuation	non-individuation
proper	common
human, animate	inanimate
concrete	abstract
singular	plural
count	mass
reference, definite	non-referential

Hopper and Thompson's approach to transitivity has been further examined and refined in subsequent works (e.g. Tsunoda 1985; Malchukov 2006; Næss 2007). In this chapter, I draw on studies of scalar transitivity to account for the seman-

47 The labels A and O are used to refer to the most agent-like and the most patient-like argument of a transitive clause.

tics of prefix alternations between the default *e-* and other prefixes on non-finite verbs. I argue that NCP *e-* is generally employed when NCPs alternate on non-finite verbs in non-derivational contexts, particularly in clauses with definite singular objects, as a marker of event individuation/unitisation. This is, as a result, an expression of what Hopper and Thompson (1980) call high transitivity, which includes the expression of telicity. Telicity refers to situations that have an inherent or intended endpoint (see e.g. Smith 1991; Depraetere 1995). By contrast, the use of NCPs such as *ba-* and *ga-*, particularly in clauses with indefinite objects or with objectless clauses, expresses features such as indefiniteness, unaffectedness and atelicity, revealing affinities with lower transitivity. Note that this is not a categorical situation but an indication of strong tendencies. In other words, prefix alternations of the type discussed here can be seen as a continuum between high and low transitivity expressed by NCP *e-* and other NCPs like *ga-* and *ba-*. I begin the discussion with clauses having definite singular objects in the next section. An examination of all the transitivity features presented in Tables 27 and 28 is left for future research. In this chapter, I focus on (un)boundedness, (a)telicity, affectedness and individuation to show that prefix alternation on non-finite verbs is related to transitivity features.

7.4 Semantics of prefix alternations and event delimitation

7.4.1 Definite singular objects

In Eegimaa non-finite clauses with definite NPs there is a strong preference for the NCP *e-* to combine with the verbal stem of the non-finite verb (see (7)). Noun class prefix alternations are also possible, that is, clauses which take definite singular objects can also take NCPs other than *e-*. But these rarer occurrences are not random. In contexts where these alternations are found (see (1) & (2) repeated in ((7) & (8)), the choice of the prefix on the non-finite verb indicates subtle semantic differences.

(7) Definite singular object with prefix *e-*.

aare-aw	umu	n'e-raf-en
[CLa]-woman(I.SG)-DEF.I.SG	I.SG.COP	PREP'CLe-suckle-CAUS
a-ññil-aw		
CLa-child(I.SG)-I.SG.DEF		

'The woman is breastfeeding the child for the moment.' (Endpoint in mind)

(8) Definite singular object with prefix *ga-*.

aare-aw	umu	n'ga-raf-en
[CLa]-woman(I.SG)-DEF.I.SG	I.SG.COP	PREP'CLga-suckle-CAUS
a-ññil-aw		
CLa-child(I.SG)-I.SG.DEF		

'The woman is breastfeeding the child.' (No endpoint in mind)

Whenever noun class prefix alternations are possible with definite NPs, they yield readings which range from apparent free variation to clear semantic distinctions. Examples (7) and (8) have a similar gloss, and may be viewed as instances of free variation, as suggested by some speakers. But there are subtle semantic distinctions. The use of NCP *e-* on the non-finite verb in (7) indicates that the event is construed as individuated in the sense that it describes a punctual or one-off ongoing event with a perceived endpoint. The sentence is normally interpreted as describing a single telic event with a built-in goal. In example (7) there is a perceived intended endpoint. It is expected that the woman who is breastfeeding the child will stop in the near future. The example is suitable to describe a situation where a woman is quickly breastfeeding a child to keep him/her quiet.

By contrast, a prefix like *ga-* focuses more on the activity, with no intended endpoint. This accounts for the durative and atelic reading of the sentence as in (8). Example (8) would suggest that the woman is breastfeeding the child continuously.

In this chapter, I use the expression '*take X time to do Y*' to test telicity in Eegimaa, because it is difficult to find an equivalent to the standard adverbial '*in X time*' test used to discover telic events. This test, which implies the existence of an inherent endpoint to an event, is exemplified in (9) and (10). For atelicity I use an equivalent of the expression '*for X time*' as in (11). Example (9) shows that NCP *e-* is preferred with the expression '*take x time to do y*'. However, as shown in example (10) using NCP *ga-* is odd in that context. On the other hand, NCP *ga-* is preferred with atelic events (see (11)). Using NCP *e-* instead of the *ga-* in this sentence would produce an odd sentence.

(9)

n-a-kkan	to	sí-mit	sú-uba	bi	e-tt-ep
REAL-I.3SG-do	there	CLsu-year(II.PL)	II.PL-two	PREP	CLe-build
y-aŋ	yayu				
CLE-house(II.SG)	II.SG.DEF				

'S/he took two years to build the house.'

(10) ??n-a-kkan to sí-mit sú-uba bi ga-ttep
REAL-I.3SG-do there CLsu-year(II.PL) II.PL-two PREP CLga-build
yaŋ yayu
CLy-house(II.SG) II.SG.DEF
'??S/he built the house for two years.'

(11) n-á-kkontine ga-ttep-yo butum sí-mit
REAL-I.3SG-continue CLga-build- II.SG.PRO up.to CLsu-year(II.PL)
sú-uba
II.PL-two
'S/he continued to build it for two years'

Further illustrations of alternations in clauses with definite singular object NPs are given in examples (12) and (13) with prefixes *e-* and *ga-* on the non-finite *-sótten* 'treat'. The reading of example (12) with NCP *e-* is that the event is ongoing but is conceived of as having time boundaries. It implies a single event with an expected endpoint (telic), but also with a temporal (though unexpressed) boundary (bounded as defined in Depraetere (1995), i.e. involving a temporal boundary). The speaker expects the nurse to finish attending to the patient in a little while. The primary reading of example (13), where NCP *ga-* is used, is that the treatment is conceived of as a long-term process with no determinable end in mind, possibly lasting weeks or months. Example (13) would be more natural in a discussion of the treatment of an incurable or long term illness, whereas (12) would be used to refer to the treatment of a wound. It might involve stopping and restarting the process several times. The process is in focus in this case rather than the isolated instance.

(12) Definite singular object with prefix *e-*.
a-lopitan-aw umu n'é-sotten
[CLa]-nurse(I.SG)-DEF.I.SG I.SG.COP PREP'CLe-treat
a-ñ̃il-aw
CLa-child(I.SG)-I.SG.DEF
'The nurse is treating the child' (now).

(13) Definite singular object with prefix *ga-*.
a-lopitan-aw umu n'gá-sotten
[CLa]-nurse(I.SG)-DEF.I.SG I.SG.COP PREP'CLga-treat
a-ñ̃il-aw
CLa-child(I.SG)-I.SG.DEF
'The nurse is treating the child' (over an extended period).

A final illustration of prefix alternations on non-finite verbs in clauses having definite singular objects is given in (14) and (15) with NCPs *e-* and *ba-*. In these examples the semantic differences yielded by the alternations can be seen very clearly. The use of NCP *e-* with the root *-vvu* 'demolish in one go/sweep' may yield two interpretations. First, example (14) could be understood as describing an event of 'sweeping' the youth centre. Second, it could also be understood as describing a situation where the entity is wiped out with a single action; in this case, the reading would be that the youth centre has been demolished in one go without leaving any traces. The latter would result in a change of state and the youth centre would then appear to be totally affected, and would thus pass the "what happened to X is Y" test and the *entailment test* for affectedness (Beavers 2011). Thus, "what happened to the youth centre was that it was demolished" suggests persistent change and total affectedness. Likewise, with the entailment test, saying "they have destroyed the youth centre, #but it was not destroyed" would result in a contradiction, since destroying the youth centre entails total change in the referent of the O argument. Note that if a progressive construction is used instead of the aspectual verb 'finish', example (14) cannot normally be interpreted as describing 'demolition in one go', since such an event is punctual. Instead, it would normally refer to a sweeping event. In example (15), however, the reading is that people were 'sweeping' the youth centre with a broom. In this case the youth centre is less affected than in the previous case and the sentence/usage would fall into Beaver's (2011: 339) "surface contact and impact" category of affectedness.

(14) Semantic differences between non-finite verbs having NCPs *e-* and *ba-*

gu-ban-e	e-vvu	e-ssal	yayu
I.3PL-finish-CPL	CLe-sweep/clear	CLe-club(II.SG)	II.SG.DEF

'They have finished clearing the club.'

(15)

gu-ban-e	ba-vvu	e-ssal	yayu
I.3PL-finish-CPL	CLba-sweep/clear	CLe-club(II.SG)	II.SG.DEF

'They have finished sweeping the club.'

To sum up, as demonstrated in Section 6.3.3.2, non-finite verbs taking NCP *ba-* describe events that are inherently characterised by a repetition of an action. They express single events characterised by multiplicity of actions (and also participants) and are comparable to Mithun's (1988: 217) "continuous repetitive actions", described for North American languages. The alternations of NCP *e-* on many non-finite verbs that take NCP *ba-* include derivational strategies in which new lexemes are created. For example, *ba-gub* 'turn soil around with a plough'

and *e-gub* 'turn upside down' are different lexemes, as are *ba-fum* 'seize someone's belongings (multiple participants involved)' and *e-fum* 'break'. The use of NCP *e-* in alternations can also serve to individuate events, resulting in ambiguities which can be disambiguated only by the discourse context.

In short, the fact that non-finite verbs with definite singular objects predominantly take NCP *e-* is not surprising when viewed from a cross-linguistics perspective. Definite singulars have determined reference (de Swart 2006: 172). Næss's (2007: 112) argument that "expressions of definiteness are used as expressions of total affectedness" relates the Malchukov's (2006: 333) that "affectedness [. . .] is related to O-individuation [i.e. individuation of the object], inasmuch as total affectedness is easier to envisage in case of definite object[48]". The examples presented above show that the object arguments in the clauses are definite and specific, which indicates values of individuation (Hopper and Thompson, 1980). Thus, I argue that in the context of prefix alternation on non-finite verbs, NCP *e-* is used to express features of high transitivity including individuation. On the other hand, NCPs like *ga-* and *ba-* are employed to indicate focus on activities, with no focus on the endpoint of the event. In light of the discussion above, it could be argued that *ga-* and *ba-* function as morphological viewpoint operators which de-telicise verbal stems. Further research is required to determine whether this claim can be made in all contexts where prefix alternations are observed.

7.4.2 Definite plural objects

With clauses involving definite plural objects, NCPs like *ga-* (see (17)), or *ba-* are more frequently used than *e-* on non-finite verbs. This shows a contrast with the definite singular objects discussed in the previous section, where NCP *e-* is the most common. In both examples (17) and (16), the object is plural and definite.

(16) Definite plural object with prefix e-.

a-lopitan-aw	umu	n'é-sotten
[CLa]-nurse(I.SG)-DEF.I.SG	I.SG.COP	PREP'CLe-treat
u-ñ̃il-aw		
CLu-child(I.PL)-I.PL.DEF		

'The nurse is treating the children.' (now)

48 Malchukov 2006 proposes a refinement of Hopper and Thompson's transitivity hypothesis arguing for hierarchised scale of the transitivity parameters. The affinities between transitivity parameters that he proposed are not explored here. They are left for future research.

(17) Definite plural object with prefix *ga-*.

a-lopitan-aw	umu	n'gá-sotten
[CLa]-nurse(I.SG)-DEF.I.SG	I.SG.COP	PREP'CLga-treat
u-ñ̃il-aw		
CLu-child(I.PL)-I.PL.DEF		

'The nurse is treating the children.' (Over an extended period).

De Swart (2006: 172) argues that definite plurals have determined reference and "determined reference imposes boundedness on the event (s)". The boundedness reading accounts for the use of NCP *e-* as exemplified in (16), which describes a specific or isolated treatment event. The event is delimited in the sense that it has an intended endpoint and is therefore telic. From a semantic transitivity perspective, definiteness is a component of high transitivity and accounts for the use of NCP *e-* in alternations. However, the use of NCPs other than *e-*, like NCP *ga-*, make up the majority of prefix uses on non-finite verbs in clauses with definite plural objects. Plurality is associated with low transitivity. NCPs such as *ga-* are used when the focus is on the activity described by the verb without any perceptible endpoint or temporal boundary to the event. These events are therefore atelic and unbounded.

In summary, similar to clauses with definite singular objects analysed in 7.4.1, non-finite clauses with definite plural objects also have specific reference. However, there is a crucial difference between these, in that the number of elements the definite singular objects denote is known whereas that of definite plural objects is not. The expression of plurality, which is a feature of lower transitivity in Hopper and Thompson's characterisation, and the focus on the activity whose endpoint is not in focus are captured by th/e use of NCP *ga-*, whereas singularity and definiteness are captured by the use of NCP *e-*.

7.4.3 Indefinite singular objects

Expressions of indefiniteness indicate partial affectedness of entities (Næss 2007: 112), which is a property attributed to low transitivity (Hopper & Thompson 1980). Singularity, on the other hand, is a property of individuation which is associated with high transitivity. Thus, indefinite singulars combine features which point to opposite ends of the high and low scalar transitivity continuum. Another way of capturing the behaviour of indefinite singulars is to say that they are characterised by a lack of determined reference, but they describe bounded and telic situations (de Swart 2006: 171–172). Examples (18) and (19) show that noun class prefix

alternations are possible on non-finite verbs taking indefinite singular objects. Note, however, that in these contexts the preferred prefixes are the non-default ones, that is, prefixes other than NCP *e-*, as exemplified with class prefix *ga-* in example (18).

(18) NCP *ga-* on a non-finite verb taking an indefinite singular object

Démbo	umu	ni	gá-binda	e-letar
Démbo(I.SG)	I.SG.COP	PREP	CLga-write	CLe-letter(II.SG)

'Démbo is writing a letter.' (No endpoint in mind)

(19) NCP prefix *e-* on a non-finite verb taking an indefinite singular object

Démbo	umu	ni	é-binda	e-letar
Démbo(I.SG)	I.SG.COP	PREP	CLe-write	CLe-letter(II.SG)

'Démbo is getting a letter written.' (Endpoint in mind)

The idea that indefinite singular objects are linked to boundedness relates to the fact that in both examples (18) and (19) the writing of a letter has an expected natural endpoint. Once the letter is written, it is totally affected. The partial affectedness mentioned above points at the fact that only one out of all the possible letters that can be written is being written. This reading would differ from *'Démbo is writing the letter'* where there is one specific letter to be completed, and not one of a possible larger set.

The prefix variations on non-finite verbs in the examples above reflect subtle semantic differences. The use of NCP *ga-* in example (18) indicates a focus on the writing activity. Though there is an expected end to the writing, the attention of the speaker is mainly on the writing process. NCP *ga-* would be more appropriate than NCP *e-* if the writer has difficulties completing the letter, either because they are learning how to write a letter or he or she requires a long time to complete the letter. By contrast, example (19), which illustrates a less common sentence than (18), is more focused on the output of the writing. NCP *e-* would be more appropriate if the person knows how to write a letter and has no difficulty completing it, or the person is not expected to spend much time to complete the letter.

In summary, the indeterminacy of the referent is shared in both examples, but the readings differ, depending on which prefix is used. As with the previous examples, the use of *e-* indicates a focus on the result and describes a more delimited event, whereas with other NCPs like *ga-*, the activity described by the verb is in focus and the endpoint of the event is backgrounded.

7.4.4 Indefinite plural objects

Indefiniteness and plurality are values of non-individuation, a feature associated with low transitivity (Hopper & Thompson 1980; Næss 2007). In de Swart's (2006) terms, the combination of indefiniteness and plurality leads to atelicity and unboundedness. Indefinite plurals are also associated with lower degree of affectedness (Næss 2007). In Eegimaa, the majority of non-finite clauses with indefinite plural objects take prefixes like NCP *ga-* or NCP *ba-* (see (20)), which are found in contexts of lower transitivity expressions, as discussed above. Alternations with NCP *e-* as shown in (21) are possible but generally less natural.

(20) NCP *ga-* on a non-finite verb taking an indefinite plural object
bu-rokk-ol ga-kkoñ si-haj
CLbu-work-3SG.POSS CLga-mind CLsu-domestic.animals(II.PL)
'His job is minding domestic animals.' (long-term job)

(21) Odd use of NCP *e-* on a non-finite verb taking an indefinite plural object
??bu-rokk-ol e-kkoñ si-haj
CLbu-work-3SG.POSS CLe-mind CLsu-domestic.animals(II.PL)
'His job is getting domestic animals minded.' (Endpoint in mind)

Example (20) describes an event characterised by its durativity with no perceived endpoint and is therefore atelic. When we apply the telicity tests presented in examples (1) to (11), we see that regardless of the NCP chosen, the 'take X time' telic test is not natural with indefinite plural arguments (see (23) and (24)). By contrast, example (22) presents a sentence that is perfectly acceptable with the equivalent of the "for-adverbial", because the event is atelic.

(22) n-á-kkontine ga-kkoñ si-haj butum
REAL-I.3SG-continue CLga-mind CLsu-domestic.animals(II.PL) up.to
sí-mit sú-uba
CLsu-year(II.PL) II.PL-two
'S/he went on minding domestic animals for two years.'

(23) ??n-a-kkan to sí-mit sú-uba bi
REAL-I.3SG-do there CLsu-year(II.PL) II.PL-two PREP
ga-kkoñ si-haj
CLga-mind CLsu-domestic.animals(II.PL)
'??S/he took two years to mind domestic animals (for a long time).'

(24) ??n-a-kkan to sí-mit sú-uba bi e-kkoñ
PEAL-I.3SG-do there CLsu-year(II.PL) II.PL-two PREP CLe-mind
si-haj
CLsu-domestic.animals(II.PL)
'??S/he took two years to mind domestic animals (once).'

Going back to examples (20) and (21), the number of elements in the set of animals is unknown, and minding domestic animals (cattle among Eegimaa speakers) is generally an activity that extends over time. Crucially, the event described here refers to the general activity of minding cattle and not a specific instance of cattle minding. If the shepherd's activity was to mind one specific animal, the form *e-kkoñ e-haj yayu* (CLe-mind CLe-domestic.animal(II.SG) II.SG.DEF) 'minding the domestic animal' would be more appropriate. NCP *e-* would then be used, indicating that the event is telic because an endpoint is expected, but also individuated, as shown by the specificity of the referent of the NP. The use of NCP *ga-* in (20) thus indicates atelicity, and also non-individuation of the event because no intended or natural endpoint is expected. Given the durative nature of the kind of event described and the genericity of the activity in (20), it is difficult, in this context, to use NCP *e-* which, as shown in the previous sections, functions as a marker of individuation.

To summarise, indefinite plural objects are typically characterised by their referent's lack of identity. The combination of indefiniteness and plurality leads to atelicity (de Swart 2006), a component of low transitivity. As the examples above show, in Eegimaa the atelic reading of sentences with indefinite plural objects is generally overtly marked by the use of NCPs like *ga-*. A telic reading is difficult to obtain with sentences having indefinite plural objects, hence the difficulty of employing NCP *e-*, which is generally used in contexts associated with higher transitivity.

7.4.5 Objectless clauses

7.4.5.1 Context-dependent and context-independent object deletion

Most transitive verbs in Eegimaa allow indefinite objects to be deleted. Following Næss (2007), a distinction is made here between two kinds of object deletion strategies. On the one hand, there is "context-independent object deletion", in which case "the semantics of the verb implies that some object is present, but where the specific referent of the omitted object is not expected to be retrievable from context" (Næss 2007: 125). Context-independent object deletion occurs with verbs like *eat* and *drink* whose object must "always be interpreted as indefinite". The other kind of object deletion is termed "context-dependent object deletion", which is characterised by the deletion of an object whose referent can, as Næss

(2007: 124–125) points out, be retrieved using cultural or linguistic cues, or from previous discourse or the general context. This distinction is crucial to understanding the types of noun class prefix alternations found in objectless clauses.

The process of object deletion is not restricted to labile ingestion verbs like 'eat'. For verbs that allow prefix alternations, indefinite object deletion is accompanied by a change in prefix, where NCPs other than the default *e-* are used. Example (25) contains a non-finite verb, which is compatible with a direct object argument, but the object is omitted. As a result, the non-finite verb takes NCP *ga-*. Using NCP *e-* in a clause where the indefinite object is deleted (as in example (26)) normally yields an infelicitous sentence.

(25) Objectless clause with NCP *ga-*
n-gu-janga-oli gá-us
PREP-I.3PL-teach-1PL.EXCL CLga-confess
'They taught us how to take confession (people).' (ss20060428_kup)

(26) Infelicitous sentence with the use of NCP *e-* in an objectless clause
??n-gu-janga-oli é-us
PREP-I.3PL-teach-1PL.EXCL CLe-confess
'They taught us how to confess.' (ss20060428_kup)

Example (25) illustrates context-independent object deletion, where the omitted object is indefinite, and the hearer does not need to identify it to interpret the utterance. The referent of the missing object is non-specific, and the non-finite verb describes the general activity of confessing rather that a specific confession event. The only context in which the use of NCP *e-* can be acceptable for such a sentence would be in context-dependent object deletion, if the object has been mentioned in previous discourse.

As with the examples from previous sections, lower transitive clauses which include expressions of indefiniteness and non-specificity are those whose non-finite verbs take NCPs like *ga-* and *ba-*. They contrast with high transitive clauses, which express definiteness and specificity and whose non-finite verbs take NCP *e-*.

7.4.5.2 Intransitive clauses

Similar to object deletions discussed above, prefix alternations are also extremely restricted with intransitive verbs. Because these verbs do not take objects, they cannot have an affected O participant. For example, the stem *-ccigo* 'get shaved' takes NCP *ga-* in its non-finite form, shown in example (27), but it is incompatible with NCP *e* -. Example (28) gives a flavour of the oddity in English.

(27) Use of NCP *ga-* with an intransitive verb

n-a-ag-e	ja-ol	n-a-kka-e	gá-ccigo
REAL-I.3SG-say-CPL	mother(I.SG)	REAL-I.3SG-go-CPL	CLga-get.shaved

'S/he said his/her mother has gone to get her head shaved.'
(ss20060428_kup)

(28) Ungrammatical use of NCP *e-* with an intransitive verb

*n-a-ag-e	ja-ol	n-a-kka-e	é-ccigo
REAL-I.3SG-say-CPL	mother(I.SG)	REAL-I.3SG-go-CPL	CLe-get.shaved

'?/S/he said his/her mother went to get her head shaved at the moment.'

Most CTPs take intransitive verbs which, in their non-finite forms, do not allow prefix alternations. I have found prefix alternations only in intransitive clauses after the allative/purposive preposition *bi* 'to/in order to'. This is exemplified in (29) and (30). A possible explanation for this is that the allative preposition, which introduces purposive clauses expresses an intention to perform an isolated action rather than the general occurrence of the event. Thus, the exceptional use of NCP *e-* is a way of expressing event singularity.

(29) Use of NCP *ga-* with an intransitive verb after the allative preposition

n-a-ag-e	ja-ol	bi	gá-ccigo
REAL-I.3SG-say-CPL	mother(I.SG)	PREP	CLga-get.shaved

'S/he said his/her mother plans to get shaved.'

(30) Use of NCP *e-* with an intransitive verb after the allative preposition

n-a-ag-e	ja-ol	bi	é-ccigo
REAL-I.3SG-say-CPL	mother(I.SG)	PREP	CLe-get.shaved

'S/he said his/her mother plans get shaved at the moment.'

Note that it is not clear whether a classification into unaccusative and unergative categories would account for the classification of intransitive verbs using different prefixes or the predominant lack of prefix alternation with stative verbs. At this stage, it appears that unaccusativity is not relevant for prefix alternation. For example, the non-finite verbs *e-ber* 'laugh' and *ga-mas* 'vomit', which are unergative, take NCPs *e-* and *ga-*. Conversely, *gá-ccigo* 'get (head) shaved' and *e-hay* 'be dry' are unergative but they take different NCPs. In other words, it is not the case that unaccusative verbs would take one set of prefixes while unergative verbs would take another set of prefixes.

7.4.5.3 Stative verbs

When the verb in the non-finite clause is stative, prefix alternations are not normally allowed. In example (31) the prefix on the non-finite stative verbs is the noun class NCP *ba-*, which in the nominal domain is a diminutive collective marker. Stative verbs which combine with noun class NCP *ba-* describe permanent behavioural characteristics that result from multiple observable signs or traits. The meaning of multiplicity of entities with nouns and multiplicity of actions and participants with dynamic verbs is carried over to the stative verbs characterised by multiple manifestations of a behavioural trait, which, when combined, make up a personal character (See Chapter VI). These stative verbs do not allow the use of NCP *e-*, as shown in example (32), because these characteristics cannot be individuated.

(31) Stative verb 'be rude' with the NCP ba-

a-ññil-aw	n-a-kkumasi-e	ba-pah
CLa-child(I.SG)-I.SG.DEF	REAL-I.3SG-begin-CPL	CLba-be.rude

'The child is beginning to show rudeness.'

(32) Infelicitous prefix alternation with the stative verb 'be rude'

??a-ññil-aw	n-a-kkumasi-e	e-pah
CLa-child(I.SG)-I.SG.DEF	REAL-I.3SG-begin-CPL	CLe-be.rude

'??The child begins to be rude.'

The examples show that patterns of prefix alternations between NCPs *e-* and other NCPs like *ba-* or *ga-* in objectless clauses are motivated by semantic transitivity features. In objectless clauses, these alternations tend to be restricted to context-dependent object deletion, where the referent of the missing object can be retrieved from the discourse context. The other NCPs are used in context-independent object deletion, where the identification of the missing object is not crucial to understand the utterance. Intransitive verbs and stative verbs in intransitive clauses do not tend to allow alternations with NCP *e-*. NCP *e-* functions as an event unitiser in the context of alternations and relates to Hopper & Thompson's (1980) high transitivity. Other NCPs like *ga-* and *ba-* correspond to expressions of low transitivity distinction. From the discussion above and the previous chapter we can distinguish two types of categorisation of events. The first may be labelled the *between-high-and-low* transitivity, where NCP alternations indicate a distinction between high transitivity, expressed with NCP *e-*, and low transitivity, expressed with the use of all other NCPs, e.g. *ba-* and *ga-*. The second is *within-low*-transitivity. Here, the semantic categorisation shows how different kinds of events in Eegimaa speakers' life are conceptualised (see chapter VI). An

example is the difference between the expression of multiplicity of actions and participants using NCP *ba-*, and the expression of bodily functions using NCP *ma-*.

7.5 Conclusion

The main goal of this chapter has been to investigate the motivations behind prefix alternation on Eegimaa non-finite verbs. Eegimaa non-finite verbs combine with noun class prefixes, and such combinations are lexically determined as shown in previous chapters. However, there are non-finite verbs that allow alternations between the nominal default NCP *e-* and the other NCPs attested on non-finite verbs. These NCP alternations express event delimitation. I showed that NCP *e-*, the default noun class marker with nouns, is used in the verbal domain as a marker of event singularity, expressing features such as telicity, boundedness and individuation of O. These features are associated with high transitivity (Hopper & Thompson 1980; Næss 2007). By contrast, NCPs such as *ga-* and *ba-* are used on non-finite verbs to express features like atelicity, unboundedness and non-individuation, which are associated with lower transitivity, in contexts where the activities rather than their instantiations are in focus.

8 Conclusion

This book presents an innovative analysis of the Eegimaa noun class and overt verb classification systems. The latter is a new phenomenon in the literature characterised by the use of the same classificatory devices as nouns (noun class prefixes (NCPs)) to classify both nouns and verbs in their non-finite forms. The overarching argument is that the cross-categorial use of the NCPs reflects a conceptual semantic categorisation of entities and events/states that nouns and verbs denote, respectively. The overt verb classification, and the novel analytical approaches used to account for the Eegimaa noun class system, is intended to contribute to the broader fields of research on these phenomena in general linguistics, linguistic typology and African linguistics.

The analysis of the Eegimaa word classes shows that this language has monocategorial classes of nouns and verbs as well as a category of verbo-nominals, a term borrowed from previous research (Houis 1981; Creissels 2017) to refer to word forms that have both nominal and verbal properties. Verbo-nominals are assigned to different overt verb classes, and the examination of their morphosyntactic and semantic assignment reveals the kind of overt verb classification found in Eegimaa.

I analyse the morphosyntactic properties of the Eegimaa noun class and agreement systems, separating nominal morphological classes from agreement classes or genders. This analytical approach, which is labelled the gender-plus-number approach, following Schadeberg (2001), is uncommon in research on Niger-Congo noun class systems. I argue that this is the best way of accounting for agreement mismatches triggered by lexical hybrids in Eegimaa.

The traditional accounts of the Niger-Congo noun class systems rely on the forms of noun class and agreement affixes. Singular nouns that trigger the same agreement patterns are assigned to the same "class", whereas their corresponding plural forms are assigned to different classes because they control different agreement patterns. Thus, the singular and the plural forms of the same count noun can be said to belong to different "noun classes". The traditional approach has been criticised for the confusing use of the term "noun class", which is used to describe the morphological paradigms of nouns in some cases but refers to agreement in other cases. The other criticism addressed to the traditional approach is that it makes it more difficult to compare these systems typologically with other agreement-based systems of nominal classification such as sex-based-gender systems.

The separation of morphological classes from agreement classes or genders proposed here (see Chapter 3) follows arguments in the theoretical and typolog-

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ical literature that morphology and syntax constitute distinct levels of analysis (Aronoff 1994), and that nominal paradigms must be analysed separately from agreement paradigms (Corbett 1991).

Analysing morphological classes separately from agreement classes makes it possible to better account for the complex singular-plural correspondences in nominal paradigms, which constitute challenges for the traditional accounts of Niger-Congo noun class systems. I analyse the Eegimaa agreement system from the perspective of canonical typology, focusing on the interactions between features such as number and their values, e.g. singular and plural. Using this approach to analyse the agreement mismatches triggered by hybrid nouns reveals that these mismatches can be based on gender, number, or both. The canonical approach used to analyse the Eegimaa complex noun class and agreement systems facilitates typological comparison with sex-based gender systems and at the same time helps to account for the semantic bases underlying agreement mismatches. I analyse agreement mismatches as manifestations of multiple morphosyntactic classifications, which reflect the multiple semantic categorisation of entities (see Chapter V).

Noun class systems are the most grammaticalised systems of nominal classification, and the question whether Niger-Congo noun class systems like Eegimaa have semantic bases is controversial in typological research and in African linguistics more specifically. One way of determining the semantics of nouns in a gender or morphological class is to look for the common denominator between nouns in that gender or class and attempt to determine the proportion of nouns that denote entities which are so classified semantically. Most studies that argue against the synchronic relevance of the semantic classification of nouns are based on this approach.

Chapter V contributes to the debate on the relevance of semantics in noun class systems by a) examining the assignment of Eegimaa nouns into morphological classes and genders, b) analysing the integration of loanwords from other languages, e.g. Wolof and French, into the Eegimaa noun class system, c) examining the use of noun class prefixes with the dummy stem *-nde* 'thingamajig', a pro-form that can combine with all noun class prefixes in the language, indicating aspects of the semantic properties of the entities denoted, and, d) analysing evaluative morphology, especially the formation of diminutives and augmentatives.

I argue that the best way to show the synchronic relevance of semantic categorisation in the classification of nouns is to argue that genders and morphological classes are associated with semantic content. I show that physical properties such as shape, which is not typically viewed as an important semantic criterion in noun class systems, play an important role this semantic categorisation of entities denoted by nouns. Size is also another important physical property

of semantic categorisation. The significance of shape is shown, for example, in the assignment of Eegimaa nouns denoting entities with a clear round shape in Gender IV, the integration of loanwords denoting round-shaped entities in Gender IV, the use of the dummy stem *-nde* 'thingamajig' with prefixes of this gender to denote round things, and the formation of augmentative and 'round, fat' meaning in Gender IV. In addition to physical properties, which have been shown to play a role in different systems of nominal classifications (see e.g. Aikhenvald 2000), culture-specific criteria are also important principles of semantic categorisation in Eegimaa. Such culture-specific principles show the importance of speakers' world view in the conceptual categorisation of objects in their environment. Examples of such principles are the classification of humans into different genders based on the way they are perceived in society, the expression of different kinds of collectives, such as the "diminutive collective" using the prefix *ba-* of Gender III, and the "collective for swarms", using the prefix *fa-* of Gender IV.

As demonstrated in the book, the same linguistic means are used for the classification of nouns and verbs in their non-finite forms in Eegimaa. This phenomenon has been reported in BAK languages like the Jóola since the early description of these languages. Chapter 4 investigates the morphosyntactic contexts in which these forms are produced, including an analysis of complementation. Fifteen classes of non-finite verbs were identified for Eegimaa.

My innovation has consisted in showing that the use of up to 15 noun class prefixes to form non-finite verbs is a form of overt verb classification which reflects a semantic categorisation of events/states (Sagna 2008; Sagna 2013b). Systems of overt verb classification have been reported in several language families (see Chapter I), but the morphosyntactic and semantic properties of the overt verb classification described for Eegimaa seem to be unique to a subset of Atlantic languages. Such systems have not been reported in Bantu noun class systems, for example. It is therefore difficult to argue for the presence of general/"universal" cross-linguistic principles of categorisation for verbs as is done for nominal classification systems (Aikhenvald 2000).

With overt verb classes, culture-specific principles of categorisation are dominant. As in the nominal domain, I argued that verb classes are associated with semantic content. In other words, although not all verbs in a class exhibit the semantic properties associated with that verb class, if an event/states clearly involves the conceptual semantic properties associated with that class, it will be assigned there.

The semantic classes that have been uncovered for the Eegimaa overt verb classification include expressions of contact and force, bodily functions, euphemism, and different kinds of pluractional expressions. The analysis proposed here also confirms a claim made in previous work that the use of the same lin-

guistic means to classify both nouns and verbs shows the existence of parallels between the nominal and verbal domains (Sagna 2008; Schultze-Berndt & Sagna 2010). Such parallels include the use of plurality or collective markers from the nominal domain as pluractional markers in the verbal domain.

Another important finding of the research proposed here is that alternations between noun class prefixes on the same stem do not simply express free variation, as argued by Sapir (1965) for Jóola Foñi. Rather, these alternations indicate semantic transitivity and event individuation, where the prefix *e-* is used in clauses associated with high transitivity, including clauses with definite singular objects (Hopper & Thompson 1980; Næss 2007), while other prefixes, like *ba-*, are preferred in clauses associated with low transitivity, for example, objectless clauses.

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Appendix A: Classification and location of Eegimaa

Eegimaa in the Atlantic family and in the BAK group

Eegimaa (also known as Banjal/Bandial (Glottolog: Band 1340; ISO 639-3: bqj)) is a Jóola language spoken in southern Senegal. Jóola languages belong to BAK group of the Atlantic family of the Niger-Congo language phylum. In the most up-to-date classification (Pozdniakov & Segerer, in press), the Atlantic family is composed of two major language groups: The North and the BAK group. The latter, to which Jóola languages belong, also includes language clusters such as Balante, Manjaku and Bijogo. Sapir (1971) introduced the term BAK to refer to a group of languages of the Atlantic family for which the plural marker on nouns of human denotation (*buk-an* 'people' in most Jóola languages) from class 2 (Gender I) has the form *B(V)K* (Sapir 1971). This marker is also found on a number of agreement targets such as demonstratives. Pozdniakov & Segerer argue that the prefix *B(V)K* originates from the use of the Proto-Atlantic plural marker **ba-* as a pre-prefix attached to the singular **ku-* to produce a new plural form **ba-ku-STEM*. In Pozdniakov & Segerer's classification presented in Figure 7 Atlantic is used to refer to Sapir's (1971) Northern Atlantic branch only. His Southern Atlantic group is excluded.

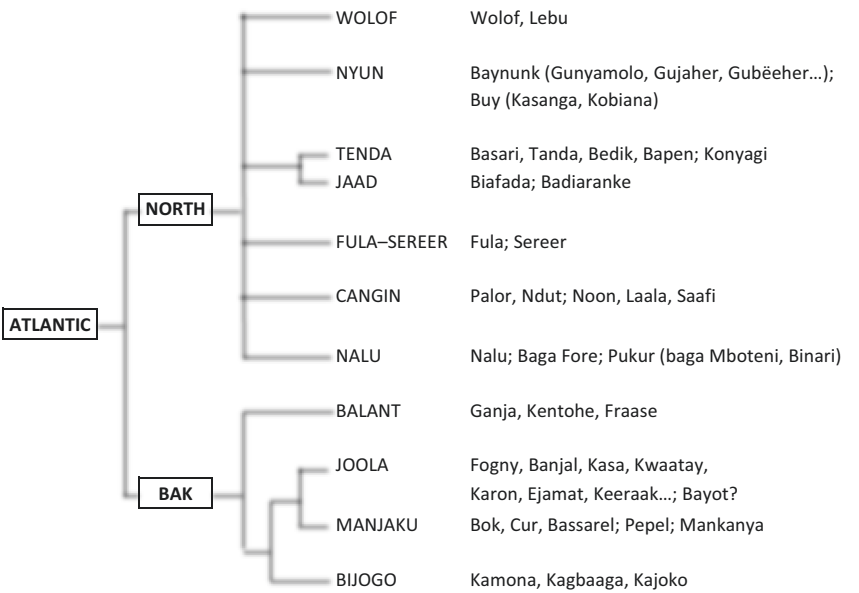

Figure 7: Genealogical classification of the Atlantic language family (diagram from Pozdniakov and Segerer in Press).

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Eegimaa within the Jóola language cluster

Jóola languages are native to the Gambia, the Lower or (Basse) Casamance area of southern Senegal (see map in Figure 8), and the north of Guinea Bissau. They are spoken by a population estimated to include between 400 000 (Williamson & Blench 2000) and 700 000 (Diatta 1998) people.

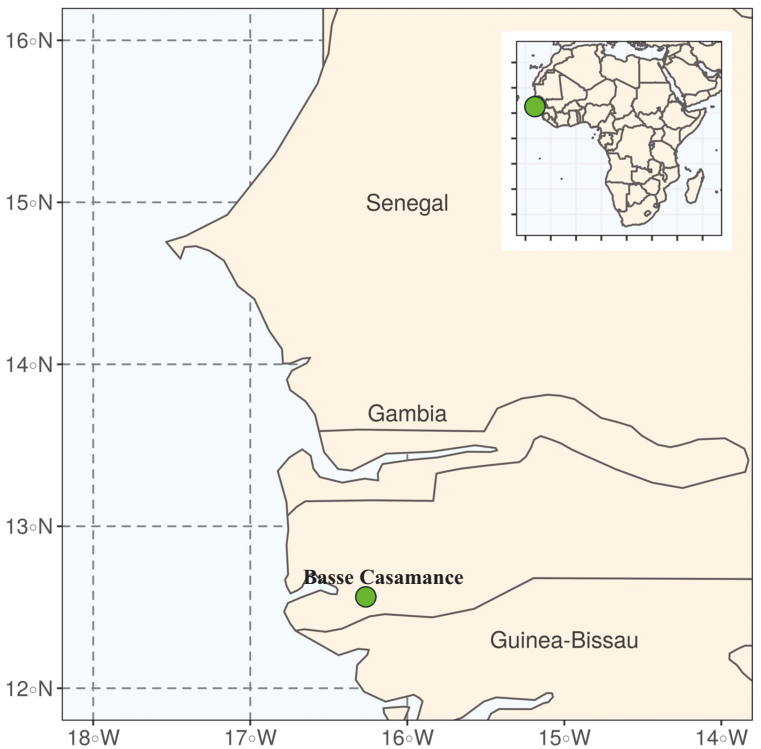

Figure 8: Basse (Lower) Casamance inside Senegal and Africa.

The internal classification of these languages is still a work in progress. However, it can be established based on available research (Sapir 1971; Barry 1987; Carlton & Rand 1994; Pozdniakov & Segerer in press) that the Jóola languages, the largest cluster in the Atlantic family according to Pozdniakov and Segerer, has around 10 languages and more lects whose status as languages or dialects has yet to be determined.

Among Jóola languages, Fóñi, which extends from the northern bank of the Casamance River around the town of Bignona to The Gambia, is the most widely used as a lingua franca, and is often referred to as "le jóola" (the Jóola language) due its official status. The second most used lingua franca is Kaasa from the Southern bank, originally spoken around the town of Oussouye (see Figure 9).

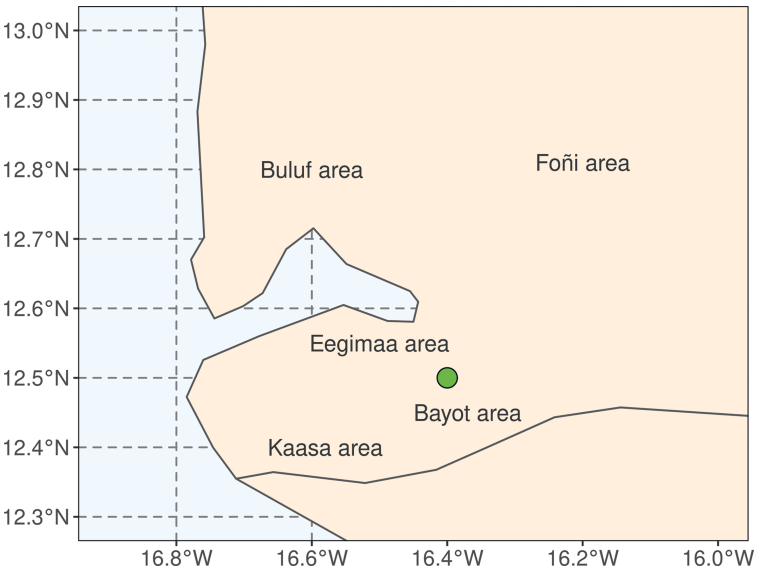

Figure 9: Basse (Lower) Casamance Jóola speaking area.

Eegimaa,[49] as Sambou (1989) points out, is a term used by speakers of this language to distinguish it from other related Jóola languages. It is a minority and endangered Jóola language spoken in a polity of ten villages called the kingdom of Mof-Ávvi meaning 'the king's land'. Mof-Ávvi (see Eegimaa area in the approximate map in Figure 10), locally known as "Le Royaume 'The Kingdom'" is composed of the following villages: Bajjat, Essil, Batiŋer, Gáabal, Enappor, Sállagi, Elubalir, Batiŋer-Bulan, Ettama and Banjal (see Figure 10). This territory is located on the south bank of the Casamance River and extends from the west of Ziguinchor, the capital city of the southern region of Senegal, to the southwest of the city. Lects closely related to Eegimaa are spoken on the north bank

49 Eegimaa means 'here is what I am telling you'. Since the term is not found in other Jóola languages in this form, it is used by Eegimaa speakers to distinguish their language from other Jóola languages.

of the Casamance River in villages including Affiniam, Boutam, Djilapaor, and Thionk-Essil. There are also settlements of Eegimaa speakers in multilingual villages such as Djifanghor and Bourofay, located East of the City of Ziguinchor. But today the largest of Eegimaa diaspora communities are found in Ziguinchor and in Dakar, the capital city of Senegal.

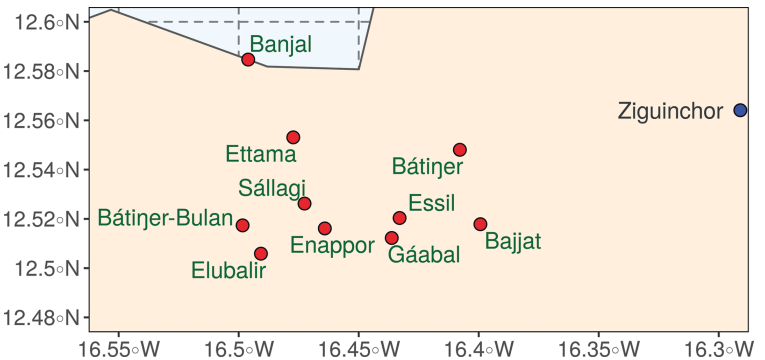

Figure 10: The Eegimaa speaking villages of Mof–Ávvi.

The most widespread kinds of names for Eegimaa are those derived from village names and used by both speakers and outsiders. *Banjal* ('the language of Banjal, one of the villages of Mof-Ávvi'), the most popular of these names, originated from speakers from the Jóola Fóñi and Búluf areas (see Figure 9) with whom fishermen from the island of Banjal came into contact before they met Eegimaa speakers from other villages. Today, native speakers of Eegimaa increasingly use the term *Gubanjalay*[50] (Banjal), to refer to their language, especially when speaking to outsiders. Other popular names for this language include *Endungo*, a name used by the neighbouring speakers of the Bayot language. *Kusiilay* ('the language of Essil') is another name used for Eegimaa by speakers of Kujireray from the neighbouring village of Brin. Eegimaa is known as *Gúlaay* ('the language of Sállagi') by speakers from the area of Sállagi. This name is the one used by speakers of Jóola Kaasa (pronounced as *Kulaakiay*). In the linguistic literature the names used for Eegimaa are Gújjolaay/Jóola Eegimaa (Sambou 1989; Sagna 2008; Bassene 2012); Jóola Banjal (Sapir 1971; Bassène 2007) and Gusiilay (Tendeng 2007). Notice that Tendeng (2007) uses *Gusiilaay* ('the language of

50 The prefix *gu-* is the noun class prefix used for language names in Eegimaa. Its equivalent in most other Jóola languages is *ku-*.

Essil') to refer to Eegimaa because many speakers argue that Gusiilay is the original name for the language, which reflects the fact that Essil was founded the first of all Mof-Ávvi villages. But this name is potentially confusing, since Gusiilaay is also used for the Jóola variety spoken in Thionk-Essil (Sapir 1971; Barry 1987), a village located on the north bank of the river Casamance, whose founders migrated from Essil.

Appendix B: Phonological sketch of Eegimaa

This section presents an overview of the Eegimaa phonological system, with a focus on contrasts that are associated with Advanced Tongue Root [ATR] vowel harmony (see Esling et al. 2019 for a critical evalution), backness harmony, consonant lenition and morphophonological processes such as gemination, degemination and prenasalisation. This short presentation is intended to help the reader make sense of the morphological alternations found in the data included in the text. For more detailed analyses of the Eegimaa phonological system see Hantgan, Sagna & Davis (2020) and references therein.[51]

Vowels and vowel harmony

[ATR] vowel harmony

Eegimaa has a ten-vowel system, with two sets that differ in terms of what is commonly described as [+/-] Advanced Tongue Root (ATR), as shown in Table 29.

Table 29: The two [ATR] vowel sets in Eegimaa.

[-ATR]		[+ATR]	
ɪ	ʊ	i	u
ɛ	ɔ	e	o
a		ə	

The type of ATR vowel harmony found in Eegimaa is, in Clement's (2000: 135) terms, a dominant harmony system. Vowels in a word tend to be either [–ATR] or [+ATR], as exemplified in Table 30.[52]

51 The overview of Eegimaa phonology presented here is a revised version of one part of Sagna (2019a). I thank the editors for allowing me to include this section here.

52 There are exceptions to the generalisation that vowels in a word tend to be from the same harmonic set. For example, words like [əxula], which end in the vowel [a], include both [+ATR] and [-ATR] vowels. Here, the final vowel [a] functions as an opaque vowel, blocking vowel harmony, and fails to harmonise.

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Table 30: [ATR] harmonic sets in Eegimaa.

[-ATR]		[+ATR]	
fɪɪl	'breast'	fiil	'palm tree inflorescence'
gaɛl	'noise'	gəel	'mind a child'
ambala	'fisherman'	gəbbəβə	'chili'
jɔffɔr	'kind of fish'	ɲondoŋ	'nape'
bʊtʊm	'mouth'	ɟugːur	'dwarf'

In Eegimaa and other Jóola languages (Sapir 1965; Sambou 1979, 1989; Sambou and Lopis 1981; Bassène 2007; Tendeng 2007; Sagna 2008; Bassene 2012), dominant vowels in vowel harmony are those of the [+ATR] set, which occur only in roots and in certain suffixes. In general, vowels of the [-ATR] change in quality when there is a dominant vowel in the root or suffix. This is exemplified in (1), where the forms that trigger the [+ATR] spread are highlighted in boldface.

(1)	Input	Output	Gloss
	ɛ-**ɸur**-ɛn	e-ɸur-en	'remove'
	gʊ-lɔβ-**um**	gu-loβ-um	'language'
	ɛ-ppɛɣ-**ul**	e-ppeɣ-ul	'open'

Backness harmony of high vowels

Eegimaa has a second type of vowel harmony,[53] which targets only high vowels and accounts for the allomorphic variation between the prefixes [ɪ] and [ʊ] on noun class prefixes. As Bassène (2007) shows (see also Bassene 2012), in prefixes with an initial labial consonant, such as those in (2), the vowel [ɪ] occurs if the initial stem vowel is a front vowel ([ɪ] or [ɛ]).[54] In all other cases (see (3)), such as when the stem vowel is [a], the vowel of the noun class prefix is [ʊ].

(2) [bɪ-ɛb̩] 'hunger' [fɪ-ɪɲ] 'liver' [mɪ-sɪs] 'salt'

(3) [bʊ-tʊm] 'mouth' [fʊ-ar] 'root' [mʊ-sʊr] 'urine'

53 I have elsewhere classified this type of vowel harmony as involving height (Sagna 2008), but it is better described as involving backness, as in Bassene (2012).

54 These rules apply regardless of the [ATR] feature of the vowels of the roots.

In prefixes with an initial coronal consonant, the vowel is [ɪ] if the initial vowel of the stem is a front vowel, [ɪ] or [ɛ], or the central vowel [a], as exemplified in (4). In all other cases the prefix vowel is [ʊ] (see (5)).

(4) [ɟɪ-tːaɟa] 'firefinch' [ɲɪ-xɪnd] 'plot of rice field' [ɟɪ-rɛm] 'small pond'

(5) [ɲʊ-ssʊ] 'shame' [jʊ-ppʊ] 'bird' [ɲʊ-ttɔt] 'cold'

Consonants and phonological processes

Eegimaa has seventeen consonants, all of which have geminate counterparts. Table 31 presents an inventory (showing singleton consonants only).

Table 31: Consonants in Eegimaa (geminates not shown).[55]

	Bilabial	Labiodental	Alveolar	Palatal	Velar
Plosives	*p/ b*		*t/ d*	*c/ ɟ*	*k/ g*
Nasal	*m*		*n*	*ɲ*	*ŋ*
Fricative		*f*	*s*		
Lateral			*l*		
Approximant	*w*			*j*	

Examples of minimal pairs, like /ɛ—paŋ/ 'shrine' and /ɛ—ppaŋ/ 'fishing fence', /ɛ—fas/ 'drain' and /ɛ—ffas/ 'know', illustrate the contrast between simple consonants and geminates. For a discussion of consonantal allophonic variations and geminates see Sagna (2008: 85–94 and 95–96).

Geminates occur in their full form in intervocalic position, as in [ga—bbʊt] 'fishing rod' and [ɟa—ssaw] 'hunt/hunting'. In word-final position, geminates are phonetically simplified, as in [ɛ—βʊt] 'deceive'. Their full forms always resurface under suffixation, as in [nɪ—βʊtt—e] 'I deceived'.

Gemination: Some comparisons with other Jóola languages

One of the most notable features of the Eegimaa phonological system is that there are no phonologically long vowels, in contrast with languages like Jóola

55 [x] is an allophone of /k/ and [r] an allophone of /d/ (see Sagna 2008).

Foñi (Sapir 1965) and Jóola Kaasa Esuulaalu? (Sambou 1979). Instead, Eegimaa has geminate consonants preceding short vowels that are long in other Jóola languages. This feature is illustrated in example (6),[56] showing that Eegimaa length falls on consonants rather than the following vowels, which bear the length feature in closely related languages.

(6)	Eegimaa	fɪ-ttɪx	'war'
	Esuulaalu?	xʊ-tɪɪk	'war'
	Fogny	fʊ-tɪɪk	'fight/war'

Because NC consonant clusters of this type are not permitted in Eegimaa, geminates also occur in places where NC voiceless consonant clusters are found in other Jóola languages. Example (7) illustrates these correspondences between Foñi and Eegimaa.

(7)	Eegimaa		Fogny	
	a**pp**a	'dad'	a**mp**a	'dad'
	gəso**tt**en	'to treat'	kaso**nt**en	'to treat'
	esi**kk**i	'to be deep'	esi**nk**i	'to be deep'

NC voiced consonant clusters

Eegimaa NC voiced consonant clusters contain nasal consonants followed by homorganic voiced plosives, as exemplified in (8). Only voiced NC clusters are found in Eegimaa, in contrast with Jóola languages like Fogny (Sapir 1965), Karon (Sambou 2007), and Esuulaalu? (Sambou 1979), where voiceless NC clusters are attested.

(8) [ɛ-mbal] 'fish net' [ɛ-ndɛ] 'thing' [iɲɟe] 'me' [ɛ-baŋgal] 'shield'

As with geminates, NC clusters are also phonetically simplified in word-final position. For example, [ɛ—famb] 'make noise' is realised as [ɛ—fam] in normal speech.

56 Phonetic notation is used in this section only. I use the Eegimaa orthographic notation in the rest of the book.

Lenition

Lenition of singleton consonants is a notable allophonic process in Eegimaa, which I examine in detail in Sagna (2008) (see Hantgan-Sonko (2017) for an alternative analysis to the one proposed here). It includes the fricativisation of voiceless plosives in word-initial position in some words, as in [ɸajɔm] 'my father', but also applies consistently in intervocalic and word-final position, as in [ɛɸaɸ] 'dust'. Voiced plosives are always fricativised in intervocalic position, as in [baβɛ] 'around here'. In word – final position, they are devoiced, as in [ɛlaḅ] 'boil'.

Intervocalic voicing is another important phonological process in Eegimaa. It occurs in suffixation, where the consonants [t] and [x] are realised as [l] and [g] respectively, when a suffix is added, generally with monosyllabic roots (Berndt 2003), as shown in (9):

(9)

Input		Output	
[ɛ-lat]	'refuse'	[nɪ-lal-ɛ]	'I have refused'
[ɛ-fɔx]	'switch off'	[nɪ-fɔɣ-ɛ]	'I have switched off'

Some morphophonological processes

Eegimaa has suffixing reduplication, which marks perfective aspect (Sagna 2008: 96). Phonological processes which occur in reduplication include gemination, degemination, consonant loss, and prenasalisation. I briefly discuss these processes in Sagna (2008: 95–96), and Hantgan, Sagna & Davis (2020) propose a theoretical account of the motivations for these processes. This analysis shows that these phonological processes are served to avoid violating the Coda Condition (CODACON), which states that a stem—internal coda is permissible only in contexts where it shares a place feature with the following onset (Hantgan, Sagna & Davis 2020: 35; see Itô 1988 for an analysis of Jóola Foñi (Diola Fogny)).

Instances of gemination reflect a strategy of mora preservation according to this analysis. They are exemplified with the inflected verb [nə—ɸuppur] 's/he went out' (formed from [e—ɸur] 'go out'), where the reduplicated form of the base [ɸur] is geminated: [ɸur+[ɸur] > /ɸuppur/. The liquid /r/ is moraic in coda position, and its deletion to avoid the impermissible cluster [rɸ], results in gemination to preserve the mora of the deleted coda consonant /r/. Degemination occurs in forms such as [na—llalat] 's/he hung', where the initial root geminate consonant [ll] of the base [llat] 'hang' is realised as a singleton consonant in the reduplicated form: [llat+llat] > /llalat/. This maintains "moraic equivalence between syllables that contain the base and the reduplicant" (Hantgan et al., 2020: 48).

Consonant loss or deletion also occurs in verbal reduplication to avoid a violation of CODACON. An example is [na—lalat] 's/he refused' (a minimal pair with [na-llalat] 's/he hung'), where the final consonant [t] is deleted from the base [lat] 'refuse', to avoid the impermissible consonant clusters [tl]. In prenasalisation, a stem—final nasal becomes homorganic with the reduplicated stem—initial voiced consonant, as in [nɪ—βɔmbɔɲ] 'I sent', formed from [ɛ—βɔɲ] 'send'. This process also involves resyllabification of the final nasal consonant. Here there is no violation of the CODACON rule, as the two consonants forming the homorganic cluster share their place feature.

Notation conventions: The Eegimaa alphabet

The notation convention used to transcribe Eegimaa data in this book is based on the orthography created by Sagna (2011c), adapted from the Senegalese Code for the transcription of national languages. Eegimaa has [+ATR] vowel harmony and this is reflected in the orthographical representation. An acute accent is placed on the first vowel of a word to indicate that its vowels belong to the [+ATR] set. When the vowels are [—ATR] no accent is added. Since the word Jóola has [+ATR] vowels in all known Jóola language varieties, it is spelt with an acute accent on its first vowel. Note that in some works Jóola is spelt <Joola>, disregarding the [+ATR] distinction. There are also publications where it is spelt, <Dyola>, <Jola> or <Diola>. These spellings are not used in this book. The vowel [o:] in most Jóola languages is long, hence the doubling of the vowel in <Jóola>. Although Eegimaa itself lacks long vowels, I have chosen to use the spelling <Jóola> to talk about these languages as a group because Eegimaa is unusual in having geminates where the other Jóola languages have long vowels. Other important orthographical notations include the following: <j> = [ɟ], <ñ> = [ɲ], <ç> = [ʃ]. Gemination is shown by consonant doubling.

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